Lampiran 1

INFORMED CONSENT (SURAT PERSETUJUAN)

Yang bertanda tangan di bawah ini:

Nama : Ernaningsih

Tempat/Tanggal Lahir : Purworejo / 11 Desember 1990

Alamat : Desa Rejosari. Kec. Kemiri, Purworejo

Bersama ini menyatakan kesediaan sebagai subjek dalam praktik *Continuity of Care* (COC) pada mahasiswa Prodi Pendidikan Profesi Bidan T.A. 2022/2023. Saya telah menerima penjelasan sebagai berikut:

1. Setiap tindakan yang dipilih bertujuan untuk memberikan asuhan kebidanan dalam rangka meningkatkan dan mempertahankan Kesehatan fisik, mental ibu dan bayi. Namun demikian, setiap tindakan mempunyai risiko, baik yang telah diduga maupun yang tidak diduga sebelumnya.
2. Pemberi asuhan telah menjelaskan bahwa ia akan berusaha sebaik mungkin untuk melakukan asuhan kebidanan dan menghindarkan kemungkinan terjadinya risiko agar diperoleh hasil yang optimal.
3. Semua penjelasan tersebut di atas sudah saya pahami dan dijelaskan dengan kalimat yang jelas, sehingga saya mengerti arti asuhan dan tindakan yang diberikan kepada saya. Dengan demikian terdapat kesepahaman antara pasien dan pemberi asuhan untuk mencegah timbulnya masalah hukum di kemudian hari.

Demikian surat persetujuan ini saya buat tanpa paksaan dari pihak manapun dan agar dipergunakan sebagaimana mestinya.

Yogyakarta, 14 Desember 2022

Mahasiswa	Klien
Endang Murdaningsih	Erna

Lampiran 2

SURAT KETERANGAN

Yang bertanda tangan di bawah ini:

Nama Pembimbing Klinik : Jumi Aprilia Wulanjati, S.Tr.Keb

Instansi : Puskesmas Kemiri

Nama Mahasiswa : Endang Murdaningsih

NIM : P07124522044

Prodi : Pendidikan Profesi Bidan

Jurusan : Kebidanan Poltekkes Kemenkes Yogyakarta

Telah selesai melakukan asuhan kebidanan berkesinambungan dalam rangka praktik kebidanan holistik *Continuity of Care* (COC)

Asuhan dilaksanakan pada tanggal 14 Desember 2022 sampai dengan 28 Januari 2023

Judul asuhan: Asuhan Berkesinambungan pada Ny E Umur 31 Tahun G2P1A0Ah1 dengan Anemia di Puskesmas Kemiri Purworejo

Demikian surat keterangan ini dibuat dengan sesungguhnya untuk dipergunakan sebagaimana mestinya.

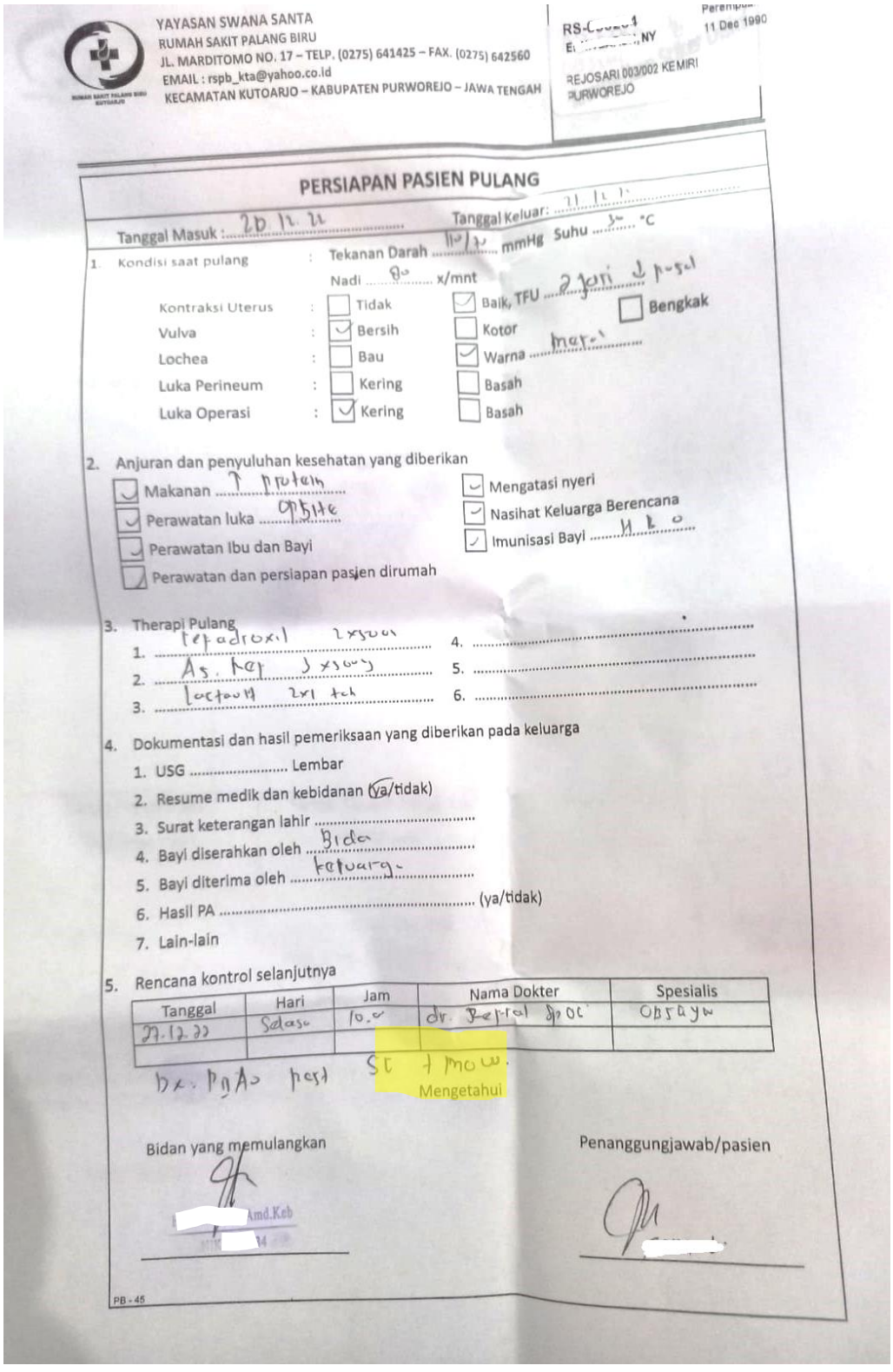
Yogyakarta, 2023

PEMERINTAH KABUPATEN PURWOREJO
PUSKESMAS KEMIRI
KEMIRI
DINAS KESEHATAN

Jumi Aprilia Wulanjati, S.Tr.Keb

Lampiran 3

Lampiran 4



YAYASAN SWANA SANTA
RUMAH SAKIT PALANG BIRU
JL. MARDITOMO NO. 17 – TELP. (0275) 641425 – FAX. (0275) 642560
EMAIL : rspb_kta@yahoo.co.id
KECAMATAN KUTOARJO – KABUPATEN PURWOREJO – JAWA TENGAH

RS-[illegible] NY
REJOSARI 003/002 KEMIRI
PURWOREJO
Perempu... 11 Dec 1990

PERSIAPAN PASIEN PULANG

Tanggal Masuk : 20 12 22 Tanggal Keluar: 21 12 22

1. Kondisi saat pulang : Tekanan Darah 110/70 mmHg Suhu 36 °C
   Nadi 80 x/mnt

Kontraksi Uterus	:	☐ Tidak	☑ Baik, TFU 2 jari ↓ p-sel	☐ Bengkak
Vulva	:	☑ Bersih	☐ Kotor	
Lochea	:	☐ Bau	☑ Warna merah	
Luka Perineum	:	☐ Kering	☐ Basah	
Luka Operasi	:	☑ Kering	☐ Basah	

2. Anjuran dan penyuluhan kesehatan yang diberikan
   - ☑ Makanan 7 protein
   - ☑ Perawatan luka Opsite
   - ☑ Perawatan Ibu dan Bayi
   - ☑ Perawatan dan persiapan pasien dirumah
   - ☑ Mengatasi nyeri
   - ☑ Nasihat Keluarga Berencana
   - ☑ Imunisasi Bayi HB 0

3. Therapi Pulang
   1. Cefadroxil 2x500 — 4. .....
   2. As. Kef 3x500 — 5. .....
   3. Lactamm 2x1 tab — 6. .....

4. Dokumentasi dan hasil pemeriksaan yang diberikan pada keluarga
   1. USG ..... Lembar
   2. Resume medik dan kebidanan (ya/tidak)
   3. Surat keterangan lahir .....
   4. Bayi diserahkan oleh Bida
   5. Bayi diterima oleh keluarga
   6. Hasil PA ..... (ya/tidak)
   7. Lain-lain

5. Rencana kontrol selanjutnya

Tanggal	Hari	Jam	Nama Dokter	Spesialis
27.12.22	Selasa	10.00	dr. Feral Sp.OG	Obsgyn

Dx. PgAs post SC + mow.

Mengetahui

Bidan yang memulangkan

[illegible] Amd.Keb

Penanggungjawab/pasien

[illegible]

PB - 45

Lampiran 5

I. ASUHAN KEBIDANAN PADA MASA KEHAMILAN

Kunjungan Pertama

ASUHAN KEBIDANAN PADA KEHAMILAN NY E, USIA 33 TAHUN, $G_2P_1AB_0AH_1$, UK 35 MINGGU 2 HARI DENGAN ANEMIA RINGAN DI PUSKESMAS KEMIRI PURWOREJO

Tanggal pengkajian : 13 Desember 2022

Tempat : Puskesmas Kemiri

No. RM : 0515xx

Data Subyektif

1. Identitas

Biodata		Istri	Suami
Nama	:	Ny E	Tn. DS
Umur	:	33 tahun	33 tahun
Pendidikan	:	DIII	SMU
Pekerjaan	:	Karyawan swasta	Karyawan swasta
Agama	:	Islam	Islam
Suku/ Bangsa	:	Jawa/ Indonesia	Jawa/ Indonesia
Alamat	:	Rejosari, Kemiri, Purworejo	

2. Alasan Kunjungan

   Ibu mengatakan ingin memeriksakan kehamilannya.

3. Keluhan Utama

   Ibu mengatakan merasa cemas menghadapi persalinan.

4. Riwayat Menstruasi

   Menarche : 12 tahun Siklus : 28 hari

   Lama : 7 hari Teratur : Teratur

   Sifat Darah : Cair (khas menstruasi) Keluhan : Tidak ada

5. Riwayat Perkawinan

   Status pernikahan : Menikah Menikah ke : Pertama

Lama : 7 tahun Usia menikah pertama kali : 26 tahun

6. Riwayat Obstetrik : $G_2P_1A_0Ah_1$

Hamil Ke	Persalinan							Nifas	
	Tahun	Umur kehamilan	Jenis Persalinan	Penolong	Komplikasi	JK	BB Lahir	Laktasi	Komplikasi
1	5 Juli 2017	9 bln	spontan	bidan	-	P	3100	+	-
2	Hamil ini								

7. Riwayat kontrasepsi yang digunakan

No	Jenis Kontrasepsi	Mulai memakai				Berhenti/ Ganti cara			
		Tgl/Bln/Th	Oleh	Tempat	Keluhan	Tgl/Bln/ Th	Oleh	Tempat	Alasan
1	IUD	’10 Agustus 2017	Bidan	BPM	-	’28-02-2022	Bidan	BPM	Ingin hamil lagi

8. Riwayat Kehamilan sekarang

a. HPHT :04-04-2022 HPL : 11-01-2023 Uk: 35 minggu 2 hari

b. ANC pertama usia kehamilan : 5 minggu 4 hari

c. Kunjungan ANC

No	TM	Frekuensi	Tempat	Keluhan	Terapi
1	I	3 kali	Puskesmas Kemiri	Pusing, mual	Asam folat, B6
2	II	4 kali	Puskesmas Kemiri	Tidak ada	Tablet tambah darah, Vitamin C, Kalsium
3	III	4 kali	RS Palang Biru Kutoarjo dan Puskesmas Kemiri	Cemas menghadapi persalinan	Tablet tambah darah, Kalk

d. Imunisasi TT : TT 3 tahun (tahun 2021)

e. Pergerakan Janin dalam 12 jam (dalam sehari) : Lebih dari 10 kali

9. Riwayat Kesehatan

a. Ibu mengatakan tidak sedang/pernah menderita penyakit jantung, TBC, ginjal, DM. Ibu belum pernah menjalani operasi, dan tidak memiliki alergi apapun baik makanan maupun obat.

b. Ibu mengatakan dalam keluarga tidak ada yang sedang/pernah menderita penyakit jantung, hipertensi, asma, DM, ginjal, maupun TBC

10. Pola Pemenuhan Kebutuhan sehari-hari

	Sebelum Hamil	Setelah Hamil
a. Pola Nutrisi		
1) Makan		
Frekuensi	: 3 x/hari	2-3 x/hari
Porsi	: 1 piring	1 piring
Jenis	: nasi, sayur, lauk	Nasi, sayur, lauk
Keluhan	: tidak ada	Tidak ada
Alergi makanan	: tidak ada	Tidak ada
2) Minum		
Frekuensi	: 5-6x/hari	Frekuensi : 8-9x/hari
Porsi	: 1 gelas	Porsi : 1 gelas
Jenis	: air putih, teh	Jenis : air putih, susu
Keluhan	: tidak ada	Keluhan : tidak ada
b. Eliminasi		
1) BAB		
Frekuensi	: 1x/hari	Frekuensi : 1x/hari
Konsistensi	: Lunak	Konsistensi : Lunak
Warna	: Khas	Warna : Khas
Keluhan	: tidak ada	Keluhan : tidak ada
2) BAK		
Frekuensi	: 5-6x/hari	Frekuensi : 6-8x/hari
Warna	: Khas	Warna : Khas
Keluhan	: tidak ada	Keluhan : tidak ada
c. Istirahat		
Tidur Malam		
Lama	: 6-7 jam/hari	7 jam/hari
d. Personal Hygiene		
Mandi	: 2 x/hari	2 x/hari
Ganti pakaian	: 2 x/hari	2 x/hari
Gosok gigi	: 2 x/hari	2x/hari
e. Pemenuhan Seksualitas		
Frekuensi	: 2-3 x/minggu	2x/minggu
Keluhan	: tidak ada	Tidak ada

f. Pola aktifitas (terkait kegiatan fisik, olah raga)

Ibu mengatakan selain bekerja juga melakukan pekerjaan rumah tangga di rumah.

11. Kebiasaan yang mengganggu kesehatan (merokok, minum jamu, minuman beralkohol)

Ibu mengatakan tidak mempunyai kebiasaan yang dapat mengganggu kesehatan seperti merokok, minum jamu, minuman beralkohol. Suami juga tidak merokok maupun minum minuman keras.

12. Psikososiospiritual:

    Ibu dan suami sangat senang dengan kehamilan ibu. Kehamilan ini merupakan kehamilan yang pertama dan ibu sudah menantikan kehamilannya. Ibu sangat senang dengan kehamilannya karena tidak perlu menunggu lama untuk segera memiliki anak. Suami sangat mendukung ibu.

    Ibu berhubungan baik dengan lingkungan sekitar.

    Ibu beragama Islam dan beribadah sholat 5 waktu/hari.

    Ibu berencana melahirkan di RS Palang Biru Kutoarjo

    Ibu berencana merawat bayinya dengan dibantu oleh keluarga dan akan memberikan ASI eksklusif.

    Ibu dan suami akan menggunakan BPJS saat melahirkan.

13. Pengetahuan ibu (tentang kehamilan, persalinan, dan laktasi)

    Ibu mengatakan mengetahui tentang tanda-tanda persalinan.

14. Lingkungan yang berpengaruh (sekitar rumah dan hewan peliharaan)

    Ibu mengatakan lingkungan di sekitar rumah bersih,dan ibu tidak mempunyai hewan peliharaan apapun.

Data Obyektif

1. Pemeriksaan Umum

Keadaan Umum	: Baik		
Kesadaran	: Composmentis		
Vital Sign			
Tekanan Darah	: 110/70 mmHg	Nadi	:80x/menit
Pernafasan	: 22 x/menit	Suhu	: 36.6 °C
Berat badan sekarang	: 54 kg	Tinggi badan	: 157 cm

Berat badan sebelum hamil : 43 kg (IMT 17,4 kg/m^2) LILA : 22 cm

Pertambahan berat badan 11 kg

2. Pemeriksaan Fisik

a. Kepala : Bentuk mesocephal, tidak ada massa/benjolan.
b. Muka : Bentuk oval, tidak ada oedema, terdapat cloasma gravidarum
c. Mata : Bentuk simetris, konjungtiva pucat, sclera putih.
d. Hidung : tidak ada polip, tidak ada infeksi.
e. Mulut : Bibir lembab, tidak ada caries gigi
f. Leher : tidak ada pembengkakan vena jugularis, tidak ada pembesaran kelenjar limfe
g. Dada : Tidak ada ronkhi, tidak ada retraksi dada
h. Payudara: simetris, tampak hiperpigmentasi areola, putting susu menonjol
i. Abdomen : Tidak ada bekas luka, tidak terdapat linea nigra, terdapat striae gravidarum

   Palpasi :

   1) Leopold I

      TFU pertengahan px dan pusat fundus teraba bagian bulat, lunak, tidak melenting (bokong)

   2) Leopold II

      Bagian kiri ibu teraba memanjang seperti papan, ada tahanan dan keras (punggung)

      Bagian kanan ibu teraba kecil-kecil, banyak, (ekstremitas)

   3) Leopold III

      Bagian terendah janin teraba satu bagian bulat, keras, melenting (kepala), kepala sudah masuk PAP

   4) Leopold IV

      Divergen, 4/5

      TFU menurut Mc. Donald : 26 cm, TBJ : 2325 gram

      Auskultasi DJJ : 136 x/menit, irama teratur kuat

j. Ekstremitas : tidak terdapat oedema baik pada tangan maupun kaki, ujung jari tidak pucat.

3. Pemeriksaan Penunjang Tanggal : 13 Oktober 2022

Hb : 10 gr/dl

Analisis Data

Ny E usia 33 tahun $G2P_1A_0Ah1$ uk 35 minggu 2 hari, janin tunggal, hidup, intra uteri presentasi kepala dengan anemia

DS : Ibu mengatakan berusia 33 tahun

Ibu mengatakan ini kehamilan pertama

Ibu mengatakan HPHT tanggal 22-04-2021

Ibu mengatakan cemas menghadapi persalinan

DO :

KU : baik

Kesadaran : composmentis

Vital sign

TD : 110/70 mmHg N : 80 x/menit

S : 36,6 ℃ RR : 22 x/menit

Px. Leopold :

1). Leopold I : TFU pertengahan pusat dan px, teraba bokong di fundus

2). Leopold II : Punggung kiri

3) Leopold III : Presentasi kepala

4). Leopold IV : divergen 4/5

DJJ : 136 X/menit, irama teratur, kuat

TFU mc Donald : 26 cm TBJ : 2325 gram

Masalah

KEK

Anemia

Ibu merasa cemas menghadapi persalinannya yang semakin dekat

Identifikasi Diagnosa Potensial

Kala I lama

Perdarahan post partum

Asfiksia BBL

Antisipasi Tindakan Segera

Pemberian KIE tentang tanda, persiapan persalinan dan nutrisi dalam kehamilan.

Penatalaksanaan

1. Memberi tahu ibu berdasarkan hasil pemeriksaan yang dilakukan kondisi ibu dan janin baik

   Evaluasi: Ibu mengatakan senang dan lega
2. Memberi konseling tentang keluhan yang dialami oleh klien, tanda bahaya kehamilan dan tanda-tanda persalinan serta persiapan menghadapi persalinan. Tanda persalinan meliputi: Timbulnya his persalinan ialah his pembukaan dengan sifat-sifatnya sebagai berikut: 1) Nyeri melingkar dari punggung memancar ke perut bagian depan, 2) Makin lama makin pendek intervalnya dan makin kuat intensitasnya, 3) Kalau dibawa berjalan bertambah kuat, 4) mempunyai pengaruh pada pendataran dan atau pembukaan cervix 5) *Bloody show* (Lendir disertai darah) 6) pecahnya kulit ketuban. Bila ibu menemui hal tersebut agar segera menghubungi petugas kesehatan. Persiapan persalinan meliputi tempat persalinan, penolong, perlengkapan ibu dan bayi, transportasi, pendamping dan dana. Tanda bahaya Ibu hamil trimester III meliputi keluar darah dari jalan lahir, demam, sakit kepala hebat disertai pandangan kabur, ibu tidak sadar. Disarankan ibu/keluarga harus segera menghubungi tenaga kesehatan.

   Evaluasi: Ibu mengatakan mengerti penjelasan yang diberikan
3. Memberikan dukungan kepada ibu agar ibu tetap tenang dan menunggu tanda persalinan dirasakan, karena jika ibu khawatir dan cemas maka akan menghambat hormone yang melepaskan reaksi persalinan

   Evaluasi: Ibu mengatakan sedikit tenang.
4. Memberikan motivasi ibu untuk rutin melaksanakan senam ibu hamil di rumah agar persalinan bisa berjalan dengan lancar.

   Evaluasi: Ibu mengatakan akan melakukan senam hamil di rumah, karena ibu sudah cuti dari pekerjaan.

5. Memberi KIE pada ibu tentang anemia dan konseling pemberian tablet Fe 1x1 sehari yaitu:
   a) Minum zat besi diantara waktu makan atau 30 menit sebelum makan, karena penyerapan berlangsung lebih baik ketika lambung kosong.
   b) Menghindari mengkonsumsi kalsium bersama zat besi (susu, antasida, makanan tambahan prenatal), karena akan menghambat penyerapan zat besi dalam tubuh.
   c) Mengkonsumsi vitamin C (jus jeruk, jambu, tambahan vitamin C), karena dapat digunakan untuk meningkatkan absorbsi zat besi non heme (berasal dari tumbuhan).[87]

   Evaluasi: Ibu mengatakan mengerti dan akan menghabiskan obat yang diberikan.
6. Menganjurkan ibu untuk melakukan kunjungan ulang 7 hari lagi atau jika ibu ada keluhan.

   Evaluasi: Ibu mengatakan mengerti dan akan kontrol ulang bila obat habis.
7. Mendokumentasikan hasil tindakan yang dilakukan

Catatan Perkembangan Kehamilan

Pertemuan Ke II

Tanggal pengkajian : 17 Desember 2022

Tempat : Puskesmas Kemiri

No. RM : 0515xx

Data Subyektif

Ny E datang ke Puskesmas dengan keluhan kadang kencang-kencang, tapi belum teratur. Gerakan janin aktif.

Riwayat Menstruasi : Menarche Usia 12 tahun, siklus 28 hari, lamanya 7 hari, teratur, sifat darah khas, keluhan tidak ada.
HPHT : 22-04-2021 HPL: 29-01-2022
Uk : 35 minggu 4 hari

Riwayat Obstetri : G2P1Ab0Ah1

1. Hamil ini

Riwayat Kesehatan : Tidak ada riwayat penyakit jantung, hipertensi, asma, DM, ginjal, maupun TBC dalam keluarga.

Riwayat Psikososial : Ibu merasa lebih siap mengahadapi persalinan karena sudah merasa kenceng-kenceng perutnya

Data Obyektif

KU : Baik Kesadaran : CM

TD : 100/60 mmHg RR : 22 x/menit

HR : 80 x/menit T : 36.5^0c

Palpasi abdomen: Teraba bokong di fundus uteri, puki, presentasi kepala, divergen 4/5 (Mc. Donald = 26 cm)

Auskultasi : 132x/ menit teratur

Analisis

Seorang ibu Ny E usia 33 tahun G2P1A0Ah1 uk 35 minggu 4 hari, janin tunggal, hidup, intra uteri, presentasi kepala, bpd (belum dalam persalinan)

Penatalaksanaan

1. Memberi tahu ibu dan suami hasil pemeriksaan, ibu dan janin baik, ibu belum dalam persalinan.

   Evaluasi: Ibu dan suami mengatakan mengerti penjelasan yang diberikan.
2. Memberi tahu ibu kencang-kencang yang dialami ibu masih merupakaan his palsu menjelang trimester akhir kehamilan. Kontraksi atau his yang adekuat adalah his yang datang secara teratur, yakni 3-4x dalam 10 menit lamanya 30-40 detik.

   Evaluasi: Ibu mengatakan mengerti penjelasan yang diberikan
3. Memberi penjelasan lagi kepada ibu tentang tanda-tanda persalinan, yaitu : kencang-kencang teratur pada perut semakin lama semakin sakit, keluarnya lendir darah dari jalan lahir dan keluarnya air ketuban.

   Evaluasi: Ibu mengatakan mengerti penjelasan yang diberikan.
4. Menganjurkan kepada ibu untuk memantau gerakan janin. Gerakan janin dapat menjadi penanda kesejahteraan janin dalam kandungan. Gerakan

janin yang aktif atau baik adalah minimal 10 kali gerakan dalam waktu 12 jam. Bila gerakan janin kurang dari 10 kali dalam 12 jam, maka ibu harus segera memeriksakan kondisi janin ke fasilitas kesehatan terdekat.

Evaluasi: Ibu mengatakan memahami penjelasan yang diberikan

5. Memberikan dukungan kepada ibu agar ibu tetap tenang dan menunggu tanda persalinan dirasakan, karena jika ibu khawatir dan cemas maka akan menghambat hormone yang melepaskan reaksi persalinan. Bila ibu tenang, maka persalinan akan terjadi.

   Evaluasi: Ibu mengatakan merasa tenang dan semangat
6. Memberi terapi Ibu tablet tambah darah 1x1 selama 7 hari dan menganjukan ibu menghabiskan tablet tambah darah.

   Evaluasi: Ibu mengatakan mengerti dan akan menghabiskan obat yang diberikan
7. Memberi tahu kepada ibu jadwal kunjungan ulang yakni pada 1 minggu yang akan datang atau bila ada keluhan.

   Evaluasi:Ibu mengatakan setuju dengan jadwal kunjungan ulang.

II. ASUHAN KEBIDANAN PADA IBU BERSALIN

Tanggal/ Jam : 20 Desember 2022/ Pkl 12.46

Data Subyektif

Ibu mengatakan melalui whatsapp bahwa telah melahirkan di RS tanggal 20 Desember 2022 karena dirujuk oleh puskesmas dengan alasan presentasi muka pada janin. Kemudian atas advise Dokter Ny E, dilakukan operasi SC pada pukul 10.00 WIB, bayi lahir sehat, BBL 2400 gram, menangis segera setelah lahir. Ny E setelah melahirkan dalam kondisi sehat. Ny E setelah melahirkan dalam kondisi sehat, dan mendapat jahitan pada jalan lahir. Pemantauan persalinan dan nifas pertama dilakukan dengan media whatsapp

Analisis :

Ny E umur 33 tahun P2A0 Ah2 post partum dengan tindakan SC persalinan atas indikasi presentasi muka

Masalah: presentasi muka.

Penatalaksanaan :

1. Memberikan dukungan dan support mental kepada ibu dan keluarga dengan mengucapkan rasa syukur serta selamat atas kelahiran anaknya dan turut bergembira.

   Evaluasi: Ibu dan keluarga senang dengan kelahirannya.
2. Menganjurkan untuk mobilisasi dini yaitu dengan latihan miring kanan dan kiri, kemudian dilanjutkan dengan latihan duduk

   Evaluasi: Ibu belajar menyusui bayinya
3. Menganjurkan kepada ibu untuk minum air putih 2-3 liter/hari, dan menghabiskan porsi makan yang disediakan.

   Evaluasi: Ibu mengatakan memahami penjelasan yang diberikan.

III. ASUHAN KEBIDANAN PADA IBU NIFAS

Pengkajian :

Askeb Ibu Nifas Hari Ke-8

Pengkajian

Tanggal : 28 Desember 2022

Jam : 12.00 WIB

Data Subyektif

Keluhan Utama

Ibu mengatakan sudah cukup sehat, dapat beristirahat, ASI sudah keluar banyak, tapi puting susu payudara sebelah kanan mengalami lecet sehingga ibu merasa nyeri saat menyusui.

Data Obyektif

1) Keadaan Umum

Keadaan umum : Baik

Kesadaran : Composmentis

2) Tanda-tanda vital

Tensi : 110/70 mmHg

Nadi : 84 x/menit

Suhu : 36,9 ^{0}celcius

RR : 20 x/menit

3) Pemeriksaan Obstetri

Mammae : membesar, puting susu menonjol, hiperpigmentasi areola, ASI (++), puting susu payudara kanan lecet dan kemerahan.

Abdomen : TFU 2 jari diatas simpisis, kandung kemih kosong, kontraksi uterus keras.

Genetalia : lochea sangueolenta, tidak berbau busuk, terdapat luka pada perineum, kering, baik, kulit sudah menyatu. PPV ± 5 cc.

Analisa

Ny E umur 33 tahun P2A0 Ah2, pot partum hari ke 8 dengan puting susu lecet

Penatalaksanaan

1. Memberitahu ibu bahwa hasil pemeriksaan baik, TD : 110/70 mmHg, TFU 2 jari diatas simpisis, kandung kencing kosong dan pengeluaran pervaginam berupa flek flek darah,dengan jumlah yang normal

Evaluasi: Ibu mengatakan senang mengetahui hasil pemeriksaan baik dan dalam kondisi normal.

2. Memberi penjelasan pada ibu tentang penyebab terjadinya lecet pada payudara ibu yaitu karena teknik menyusui yang kurang benar.
3. Menganjurkan ibu untuk selalu cuci tangan sebelum menyentuh bayi.

4. Memberi KIE pada Ibu tentang teknik menyusui yang benar dan mempraktekkan langsung pada bayi.
    a. Memperhatikan posisi bayi
        1) Kepala bayi dan badan bayi harus dalam satu garis yaitu bayi tidak dapat mengisap dengan mudah apabila kepalanya bergeser atau melengkung
        2) Muka bayi menghadap payudara dengan hidung menghadap puting yaitu seluruh badan bayi menghadap badan ibu
        3) Ibu harus memegang bayi dekat pada ibu.
        4) Apabila bayi baru lahir, Ibu harus menopang bokong bukan hanya kepala dan bahu merupakan hal yang penting untuk bayi baru lahir.
    b. Memberi tahu tanda bayi menyusu dengan efektif adalah:
        1) Bayi terbuka matanya lebar-lebar seperti menguap, dengan lidahnya ke bawah dan kedepan persis sebelum ia merapatkan mulutnya di payudara
        2) Ia menarik puting dan sebagian besar areola masuk kedalam mulutnya
        3) Dagunya melekuk pada payudara ibu dan hidungnya menyentuh susu ibu
        4) Bibirnya dipinggir dan lidahnya menjulur diatas gusi bawahnya
        5) Rahangnya bergerak secara ritmis ketika bayi disusui
        6) Bayi mulai disusui dengan singkat dan cepat. Begitu susu mengendur, ia menyelesaikan ke dalam corak yang lambat dengan penuh susu dan jeda waktu yang singkat.[80]

6. Memberi KIE tentang perawatan payudara yang benar yakni
    a. Tidak membersihkan putting dengan sabun, alcohol, atau zatiritan lainnya. Pada putting susu dapat dioleskan ASI sebelum dan selesai menyusui dan biarkan mengering sebelum memakai BH
    b. Menyusui lebih sering (8-12 kali dalam 24 jam) sehingga payudara tidak sampai terlalu penuh
    c. Selain itu juga perawatan putting susu yang lecet sementara putting susu yang lecet tidak digunakan untuk menyusui/istirahat selama sedikit-dikitnya selama 24 jam. Peras ASI dari payudara yang lecet.Jika perlu pada waktu meneteki mempergunakan alat pelindung putting susu. Peras ASI dari payudara yang lecet bila setelah disusu.
    d. Menggunakan BH yang menyangga.[90]
7. Memberi KIE tentang cara meningkatkan produksi ASI, ibu disarankan untuk sering mengkonsumsi daun katuk. Selain daun katuk, Ibu juga bisa mengkonsumsi temu lawak. Menurut Kemenkes cara mengkonsumsi temulawak untuk meningkatkan produksi ASI yaitu bahan ramuan : Temulawak 7 iris, Meniran 1/2 genggam, Pegagan 1/4 genggam, Air 3 gelas. Cara pembuatan yaitu mencampurkan semua bahan kemudian direbus dalam air mendidih selama 10 sampai 15 menit dengan api kecil. Diminum 2 kali sehari, pagi dan menjelang tidur malam. Selain dengan cara itu, suami Ny E juga bisa mendukung Ibu dalam meningkatkan produksi ASI yaitu dengan cara akupressur. Titik akupressur yang disarankan menurut Kemenkes adalah dllakukan pemijatan pada perpotongan garis tegak lurus dari sudut kuku bagian kelingking. Lokasi yang lerletak 4 jari di bawah tempurung lutut di tepi luar tulang kering.
8. Memberi KIE pada Ibu tentang nutrisi selama menyusui.

    Kebutuhan gizi selama menyusui meliputi:

a) Karbohidrat

   Saat 6 bulan pertama menyusui, kebutuhan ibu meningkat sebesar 65 gr per hari atau setara dengan 1 ½ porsi nasi.

b) Protein

   Sangat diperlukan untuk peningkatan produksi air susu. Ibu menyusui membutuhkan tambahan protein 17 gr atau setara dengan 1 porsi daging (35 gr) dan 1 porsi tempe (50gr).

c) Lemak

   Kebutuhan minyak dalam tumpeng gizi seimbang sebanyak 4 porsi atau setara dengan 4 sendok the minyak (20 gr)**.** Lemak yang dipelukan untuk ibu menyusui yaitu lemak tak jenuh ganda seperti omega-3 dan omega-6

d) Vitamin yang penting dalam masa menyusui adalah vitamin B1, B6, B2, B12, vitamin A, yodium & selenium. Jumlah kebutuhan vitamin & mineral adalah 3 porsi sehari dari sayuran dan buah-buahan.

e) Ibu menyusui sangat membutuhkan cairan agar dapat menghasilkan air susu dengan cepat. Dianjurkan minum 2-3 liter air per hari atau lebih dari 8 gelas air sehari (12-13 gelas sehari). Terutama saat udara panas, banyak berkeringat dan demam sangat dianjurkan untuk minum >8 gelas sehari.

f) Waktu minum yang paling baik adalah pada saat bayi sedang menyusui atau sebelumnya, sehingga cairan yang diminum bayi dapat diganti. Kebutuhan cairan dapat diperoleh dari air putih, susu, jus buah-buahan dan air yang tersedia di dalam makanan.

IV. ASUHAN KEBIDANAN PADA BAYI BARU LAHIR USIA 8 HARI

Tanggal : 28 Desember 2022 pkl: 12.30 WIB

Identitas Bayi

Nama : Bayi Ny E

Tanggal/ Jam Lahir : 20 Desember 2022/ 10.00 WIB

Jenis kelamin : Laki-laki

Data Subyektif

1) Riwayat Persalinan Sekarang

   Ibu mengatakan melahirkan secara SC atas indikasi presentasi muka pada tanggal 20 Desember 2020 pukul 10.00 WIB. Persalinan ditolong oleh dokter, jenis kelamin Laki-laki, berat badan 2400 gram, panjang badan 46 cm , lingkar kepala 31 cm. Bayi lahir menangis segera setelah lahir.

2) Pola Pemenuhan Kebutuhan Sehari-Hari

   a) Pola Nutrisi

      Saat ini bayi hanya minum ASI.

   b) Pola Eliminasi

      Bayi sudah BAB sehari 1kali normal dan BAK 8-10 kali.

   c) Pola Istirahat

      Bayi masih sering tidur. Tidur malam 10 jam, tidur siang sekitar 8 jam.

   d) Pola Hygiene

      Bayi dimandikan sehari 2 kali, dibersihkan kemaluannya dan diganti popoknya setiap selesai BAK dan BAB.

Data Obyektif

1) Pemeriksaan Fisik

   Pemeriksaan Umum

   Keadaan umum: bayi sehat, gerakan aktif, menangis kuat, tonus otot baik

   Vital Sign

Denyut Jantung : 130x/menit Suhu : 37^0 C RR : 60x/menit

Pengukuran Antropometri

BB : 2600 gram Lingkar Kepala/LK : 31 cm

PB : 48 cm Lingkar Dada/ LD : 30 cm

2) Pemeriksaan fisik

Kepala : Mesocephal, tidak ada caput suksedanum, tidak ada cephal hematoma

Mata : Konjungtiva merah muda, sclera putih

Hidung : tidak terdapat pernapasan cuping hidung

Leher :Tidak ada pembengkakan vena jugularis

Dada : tidak ada retraksi dada, tidak ada stridor maupun ronkhi

Abdomen : Tidak ada pembesaran pada perut, tali pusat sudah puput.

Genetalia : testis telah masuk ke dalam skrotum, tidakada hipospadia

Kulit : tidak ikterik

Analisis

Bayi. Ny E, neonatus hari ke-8 fisiologis.

Penatalaksanaan

1. Memberitahukan ibu bahwa dari hasil pemeriksaan bayinya sehat.
   Evaluasi: Ibu mengatakan senang mengetahui keadaan bayinya sehat.
2. Menganjurkan kepada ibu untuk memberikan ASI dan menyusui bayi sesering mungkin, karena semakin sering menyusui maka semakin banyak prolaktin dan ASI yang dikeluarkan sehingga bayi sehat dan dapat tumbuh optimal. Ibu sebaiknya memberikan ASI saja tanpa tambahan apapun termasuk air putih dan susu formula selama 6 bulan atau ASI eksklusif, dan meneruskan pemberian ASI dengan tambahan MP-ASI (makanan pendamping ASI) hingga anak berusia 2 tahun.
   Evaluasi: Ibu mengatakan bersedia untuk menyusui bayinya secara eksklusif.

3. Memberi KIE tentang imunisasi BCG dan menganjurkan ibu untuk mengimunisasikan bayinya sebelum usia 3 bulan, memantau pertumbuhan dan perkembangan anak dengan melakukan penimbangan setiap bulan di posyandu, dan melakukan stimulasi perkembangan pada Anak

   Evaluasi: Ibu mengatakan dapat memahami penjelasan yang diberikan.

V. ASUHAN KEBIDANAN KELUARGA BERENCANA

Tanggal Pengkajian : 28 Januari 2023 jam 13.21

Data Subyektif

Pemantauan nifas selanjutnya yaitu post partum hari ke 38, Ibu mengatakan dirinya dan bayi dalam keadaan sehat, tidak ada keluhan terhadap kesehatannya. Ibu mengatakan lega karena sudah MOW.

Riwayat persalinan : Ibu bersalin pada tanggal 20 Desember 2022 jam 10.00 WIB secara SC atas indikasi presentasi muka ditolong oleh dokter SpOG di RS Palang Biru Kutoarjo. Bayi lahir dengan berat badan 2400 gram/ PB 46 cm/ LK 31 cm. Ibu mengalami ruptur grade II. Kondisi ibu dan bayi sehat.

Analisis

Ny E umur 33 tahun P2A0 Ah2, post partum hari 38

Penatalaksanaan :

1. Memberikan pujian karena ibu telah sukses mengikuti program pemerintah yaitu KB pasca salin.
2. Memberikan informasi kepada ibu tentang metode kontrasepsi selama menyusui yang dapat ibu pilih. Ibu dapat menggunakan kondom, KB pil, suntik 3 bulanan, IUD, dan implan. Ibu juga dapat menggunakan metode alamiah yakni MAL (Metode Amenorea Laktasi), pantang berkala, suhu basal, maupun kalender. Setiap metode kontrasepsi mempunyai efektifitas yang beragam dalam mencegah kehamilan.

   Evaluasi: Ibu memutuskan untuk menggunakan KB suntik 3 bulan.

3. Melakukan konseling kepada Ny E tentang kontrasepsi suntik 3 bulan yang menjadi pilihan ibu. Konseling yang diberikan pada ibu meliputi pengertian, manfaat, efek samping, dan kegagalan. Konseling yang diberikan pada Ny E adalah bertujuan untuk meningkatkan keefektifan individu dalam pengambilan keputusan secara tepat.

   Evaluasi: Ibu mengatakan akan suntik KB setelah masa nifas selesai.

Pembimbing Akademik	Pembimbing Klinik	Mahasiswa
(Dr. Sujiyatini..M.Keb)	(Dwi Aprilia Wijiamati. S.Tr.Keb)	(Endang Murdaningsih)

Lampiran 6

The effect of maternal anaemia on low birth weight among newborns in Northwest Ethiopia

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Affiliations expand

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Abstract

Low birth weight is an indicator of maternal-related multifactorial problems such as malnutrition, illness, and work overload. As a result, low birth weight is associated with maternal anaemia, and both of them were significant public health issues in developing nations. Low birth weight and anaemia are caused by insufficient nutrient intake, which is especially severe during pregnancy. So, this study aimed to assess the effect of maternal anaemia during the late trimester on low birth weight among newborns in Northwest Ethiopia. A systematic random sampling technique was used to select 211 participants for the primary data collection. Face-to-face interviews were used to collect data, while blood samples were collected using standard operating procedures. For further analysis, the data file was imported into Stata version 16 (MP) software. The binary logistic regression model was used to investigate significant factors related to low birth weight. Finally, the statistical significance of the variables was determined using a p value of ≤ 0.05. The prevalence of anaemia among pregnant women in the late trimester and newborns was 34 (16.11%, 95% CI: 11.42, 21.78) and 64 (30.33%, 95% CI: 24.20, 37.01), respectively. The mean ± standard deviation of the newborn babies' weight was 3.19 ± 0.49 kg. The proportion of low birth weight among newborns was 26 (12.32%, 95% CI: 8.20, 17.53%). The independent effect of anaemia on low birth weight was 4.19 times while all other factors were constant (COR = 4.19, 95%

CI: 1.70, 10.30). Maternal educational status [unable to read and write (AOR = 10.94, 95% CI: 1.74, 68.58) and attained secondary education (AOR = 8.06, 95% CI: 1.53, 42.36)], and maternal anaemia (AOR = 3.51, 95% CI: 1.29, 9.55) were associated with low birth weight after adjusting with all other variables. In this study, the proportion of low birth weight was high. Here, maternal anaemia alone had a significant independent role in the development of low birth weight. Maternal education status and anaemic conditions were associated with low birth weight among newborns. Early detection and treatment of maternal anaemia during pregnancy is crucial with the usual nutritional-related care.
Subject terms: Diseases, Health care, Medical research, Risk factors

Introduction

Anaemia is hematological abnormality and has a significant public health problem globally. World Health Organization (WHO) reports that more than 1.62 billion people are affected globally. Of these, 56 million pregnant women (41.8%) were suffering from varying degrees of anaemia[1]. Despite anaemia being found worldwide, it's more prevalent in developing countries[2]. In Ethiopia, the prevalence of anaemia among pregnant women ranges from 11.6 to 45.4%[3,4].

Anaemia is one of the complications during pregnancy, and it also has adverse effects on neonatal outcomes like[5] fetal anaemia, stillbirth, and low and very low birth weight (LBW)[6,7]. A study conducted in Nepal showed that the risk of LBW was 6.8 times higher among anaemic mothers[8]. Another study reveals that anaemia during pregnancy increases the risk of LBW among newborns[9].

Maternal nutritional deficiency during pregnancy affects the developmental process of the fetus, which subsequently influences the birth weight of the newborn[10]. The fetus is highly dependent on maternal nutritional intake since malnutrition during pregnancy leads to different adverse birth outcomes like LBW. During pregnancy, insufficient storage or inadequate

intake of essential nutrients can cause harmful effects on both the mothers and newborn babies[11–13].

Birth weight is a good indicator to measure multi-layered pubic-related health problems like long-term maternal malnutrition, health status, and poor health care delivery system. The LBW is one of the most basic and common health indicators used to assess the status of infants. It is still the major determinant of mortality, morbidity, and disability in infancy and childhood to a long-term impact on health outcomes in adult life. Also, it affects the health sector economy, has a higher risk of death and illness shortly after birth and non-communicable disease, and is a significant burden on society as a whole[14,15].

According to the WHO, we can say LBW if the weight of the newborn is < 2500 gm[16]. The prevalence of LBW ranges from 15 to 20% (over 20 million births annually) globally, and a majority (90%) of them are found in low-and-middle-income countries[17,18]. According to the Ethiopian demographic health survey (EDHS) report, the magnitude of LBW increased from 11 to 13%[19,20]. Also, this prevalence is high (18%) in Southern Ethiopia[21]. Based on the 2011 EDHS finding, the magnitude of the LBW report varies from region to region, 30% in Afar, 28% in Amhara, 26% in Somali, and 27% in the Gambela region[19].

As corresponded to normal, LBW infants were 20 times more likely to develop complications and die[22]. It is the potential risk of cognitive deficits[23], motor delays[24], cerebral palsy[25], other behaviour[26], and psychological-related problem[27].

Birth weight is one of the predictive factors of newborn death in the first few months of life[28]. In Ethiopia, in 2014, there were 27,243 deaths, of which LBW accounted for 4.53% of the total deaths[29]. Globally, LBW is still a significant determinant factor for infant mortality, and morbidity, which causes short- and long-term consequences in later life.

LBW is an adverse health outcome that continues to later life and seriously impairs the normal functioning of an individual. LBW comes with numerous social and economic problems for

a country[30]. Therefore, this study aimed to assess the effect of maternal anaemia on the birth weight of newborn babies.

Materials and methods

Study design, period, and setting

The primary data were collected cross-sectionally from February 1 to April 30, 2019. The initial study was conducted at the Gynecology and Obstetrics Department, University of Gondar Comprehensive Specialized Hospital in Gondar Town, Northwest Ethiopia. The Town is located in the Amhara region, 180 km far from Bahir Dar, the capital city of the Amhara regional state, and 727 km from Addis Ababa, the capital city of Ethiopia. Gondar Town is found 2133 m above sea level. The hospital delivers several primary services in paediatrics, surgery, gynaecology and obstetrics, and Internal medicines departments with teaching–learning activities.

Study population

All full-term newborn babies (39–42 weeks of gestational age) were the study population for this secondary data analysis.

Sample size determination

For the primary objective (i.e. prevalence and associated factors of anemia among full-term newborn babies), the sample was determined using a single population proportion formula. But, this is a secondary data analysis beyond the primary objective. So, this secondary data analysis includes 211 full-term newborn babies data[31].

Eligibility criteria

For this study, 211 study participants' data were included (full-term newborn babies paired with their mothers). During primary data collection, mothers who had twin newborns, complications during pregnancy, and known chronic illnesses (diabetes, preeclampsia/hypertension, HIV/AIDS, chronic kidney, liver disease, malaria, and any malignancy) were excluded from this study. If the clinician had already confirmed the diagnosis, then the presence of co-morbidities was taken into account (subclinical conditions were not investigated).

Moreover, individuals with any hemoglobinopathy conditions were excluded from the study.

Sampling procedure

This secondary data was collected by applying a systematic random sampling technique was employed to select study participants. At this time, every 4th pregnant woman during the delivery time from February 1 to April 30, 2019. The first study participant was selected randomly by lottery methods every day, and excluded study participants were substituted by the succeeding participants (subsequent consecutive study participants).

Data collection methods and tools

At the time of primary data collection, the pre-tested Amharic version questionnaires were employed. The questionnaire consists of socioeconomic, dietary intake (iron-rich foods), antenatal care (ANC) follow-up, supplementation, complication during birth, and previous pregnancy-related characteristics. The weights were measured using the Seca scale, and results were recorded to the nearest 0.1 kg. About 3 ml cord blood sample was drawn from the umbilical vein of the cord by midwives professional, and from each selected mother, 3 ml of blood was drawn from each mother. Then, a complete blood count was done by laboratory professionals. The dietary data were collected using a meal frequency questionnaire with five options (once a week, twice a week, more than twice a week, once per month, and less than one time per month). Finally, we reduced it into three categories due to small frequency (twice and above a week, once a week, and no/never/not at all).

Data quality

Initially, a pre-test was done on 5% of the total sample size outside the study area (at Debre Tabor Referral Hospital) after training the data collectors. In addition, the questionnaire was collected using the Amharic language (local). At all times during the primary data collection, cross-checking of collected questionnaires was done daily. The collected data were

checked for completeness and consistency by investigators and supervisors.

To ensure the quality of the laboratory test, a standard operating procedure was followed during specimen collection, and daily cleaning and background runs were done to ensure the laboratory results. Also, to avoid hemolysis and mix-up of sample, appropriate sample transportation using a test tube and labelling was done on the sample with the same identification number. All materials and reagents were checked for the expired date before sample processing.

Operational definitions

- **Anaemia among newborns**: If the newborn Hb level was < 14 mg/dl from newborn cord blood.
- **Anaemia among pregnant women**: If a Hb level of a pregnant woman was < 11 mg/dl after adjusting for altitude. The magnitude is further categorized as mild, moderate and severe anaemia if the haemoglobin count (g/dl) is between 10.0 and 10.9, 7.0 and 9.9 and < less than 7.0, respectively.
- **Low birth weight:** If the birth weight of a newborn was < 2500 gr.

Data processing and analysis

This secondary data was imported to the Stata. Then, by using the Stata 16.0/MP version for windows, data cleaning, recategorizing, and tabulation were done. Then, both descriptive and analytical analysis of variables was employed. Binary and multivariable binary logistic regression analysis was hired to assess the independent and multiple effects of each variable on the LBW. During bivariable binary logistic regression, candidate variables for multivariable analysis were chosen if the *p* value was ≤ 0.25. Finally, a *p* value ≤ 0.05 was used to declare statistical significance during multivariable analysis. For each odd ratio (ORs; adjusted and crude), 95% CI was computed. The model fitness was tested using Hosmer and Lemeshow tests (*p* value = 0.9711) during the final model.

Ethical approval and consent from participants

For this secondary data analysis, the ethical clearance letter was obtained from the Ethical Review Committee of Debre Tabor University. Also, written informed consent was obtained from each selected mother after explaining the study. The data was collected without personal identifiers, and for anaemic and low-birth newborn babies, immediate consultation took place in addition to information dissemination by data collectors.

Results

Sociodemographic results of study participants

In this study, 211 participants' data were analyzed. The mean ± SD of the pregnant women's age was 27.36 ± 5.19 years, which ranges from 18 to 44 years. All of the participants were from Amhara ethnic. Of all, 178 (84.36%) pregnant women were from urban areas. Only one-third of the pregnant women attended more than secondary school and above (Table (Table11).

Table 1

Sociodemographic characteristics of the study participant of the pregnant mother and the newborns Northwest Ethiopia, 2019 (n = 211).

Characters	Category	Frequency	Percentage (%)
Age (years)	16–19	26	12.32
	20–24	56	26.54
	25–29	90	42.65
	≥ 30	39	18.48
Religion	Orthodox	188	89.10
	Muslim	20	9.48
	Protestant	3	1.42
Residence	Urban	178	84.36
	Rural	33	15.64
Educational status	Unable to read and write	36	17.06
	Able to read and write	44	20.85
	Primary school (1–8)	61	28.91
	Secondary school and above	70	33.18
Occupational status	Employed	70	33.18
	Housewife	141	66.82

Characters	Category	Frequency	Percentage (%)
Sex of the newborns	Male	106	50.24
	Female	105	49.76

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Maternal reproductive health and newborn-related characteristics

Almost all pregnant women [198 (93.84%)] had ANC follow-up for their respective pregnancies. Also, all of the mothers had an intake history of Iron with folic acid supplementation for this pregnancy. More than half of the pregnant women [118 (55.92%)] were multigravida, while others were primigravida [93 (44.08%)]. From all, 171 (81.04%) the index children were delivered vaginally, but the rest of the pregnant women were delivered via cesarean section. Of all pregnant women, only [18 (8.53%)] have had a history of vaginal bleeding during their pregnancy.

Dietary intake-related characteristics of the pregnant women

Among study participants, the consumption of iron reach foods at least once per week was 50%. The consumption of vegetables, fruits, and red meat once per week was 93 (44.08%), 110 (52.13%), and 133 (63.03%), correspondingly (Table (Table22).

Table 2

Dietary habit-related characteristics of pregnant women in Northwest Ethiopia, 2019 (n = 211).

Characters	Category	Frequency	Percentage (%)
Consumption vegetable	Twice a week and above	76	36.02
	Once a week	93	44.08
	Never	42	19.91
Consumption fruit	Twice and above a week	55	26.07
	Once a week	110	52.13
	No/never	46	21.80
Consumption of red meat	Once a week	133	63.03
	Not at all	78	36.97

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The magnitude of anaemia and low birth weight

The mean ± SD of the pregnant women's Hb after adjusting for altitude and hematocrit was 13.23 ± 1.81 g/dl and 39.66 ± 5.30, correspondingly. The prevalence of anaemia among the delivered women using the adjusted Hb for altitude was 34 (16.11%, 95% CI: 11.42, 21.78). Among anaemic pregnant women, the magnitude of moderate and mild anaemia was 11 (5.21%) and 23 (10.90%), respectively.

The mean ± SD of the newborn babies' Hb and hematocrits was 15.70 ± 2.11 g/dl and 47.81 ± 6.06, correspondingly. The prevalence of anaemia among the newborn was 64 (30.33%, 95% C:I 24.20, 37.01) using the cord blood adjusted Hb for altitude. The mean ± SD of the newborn babies' weight was 3.19 ± 0.49 kg, which ranges from 1.60 to 4.2kgs. The proportion of LBW among newborns was 26 (12.32%, 95% CI: 8.20, 17.53%). The prevalence of LBW among anaemia and non-anaemic women was 10 (29.41%, 95% CI: 15.09–47.7%) and 16 (9.04%, 95% CI: 5.25 - 14.26%), respectively.

Factors associated with low birth weight among newborn

While all other factors were assumed constant, pregnant women who had anaemia during late pregnancy were 4.19 (COR = 4.19, 95% CI: 1.70, 10.30) times more likely to have a newborn with LBW as compared to those who had no anaemia. This finding shows that the prevention of anaemia is vital to decreasing the occurrence of LBW.

Also, the adjusted effects were assessed using bi-variable binary logistic regression. At this time, maternal anaemia status, maternal educational status, maternal occupation, consumption habit of vegetables, and consumption habit of red meat were the significantly associated variables for LBW. Finally, these significant variables were fitted into multivariable binary logistic regression. During multivariable analysis, maternal anaemia status and maternal educational status were the associated factors for the occurrence of LBW among newborns as shown in the table below (Table (Table33).

Table 3

Binary and multivariable logistic regression analysis of factors associated with low birth weight among newborns in Northwest Ethiopia, 2019 (n = 211).

Variables	LBW		Odds ratios	
	Yes	No	COR (95% CI)	AOR (95% CI)
Maternal educational status				
Unable to read and write	8	28	**9.71 (1.94, 48.63)**	**10.94 (1.74, 68.58)**
Primary school 1–8)	5	39	4.35 (0.81, 23.53)	5.35 (0.84, 34.01)
Secondary school	11	50	**7.48 (1.58, 35.25)**	**8.06 (1.53, 42.36)**
Above secondary school	2	68	1	**1**
Maternal occupation				
Employed	6	64	1	1
Housewives	20	121	1.76 (0.67, 4.61)	0.56 (0.17, 1.79)
Consumption of vegetables				
Twice a week and above	4	35	0.28 (0.07, 1.01)	0.46 (0.11, 1.98)
Once a week	15	78	0.96 (0.36, 2.56)	1.47 (0.46, 4.64)
Never	7	72	1	1
Consumption of red meats				
Yes	7	71	1.69 (0.67, 4.22)	1.88 (0.70, 5.03)
No	19	114	1	1
Maternal anaemia status				
No	16	161	**4.19 (1.71, 10.30**)	**3.51 (1.29, 9.55) ***
Yes	10	24	1	1

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LBW, low birth weight; *shows statistically significant $p < 0.05$; 1 = reference group; AOR, adjusted odd ratio; COR, crude odd ratio.

Significant values are in bold.

In this study, newborn babies from unable to read and write pregnant women were 10.94 times more likely (AOR = 10.94, 95% CI: 1.74, 68.58) to have LBW babies as compared to those who attend above high school. Also, these mothers who attended secondary education were 8.06 times (AOR = 8.06, 95% CI: 1.53, 42.36) more likely to give LBW newborn.

Likewise, the independent effect above, newborn children from anaemic pregnant women were 3.51 times (AOR = 3.51, 95% CI: 1.29, 9.55) more likely to have a low-birth-weight baby as compared to non-anaemic pregnant women.

Discussion

LBW is a leading public health problem that is mainly associated with an increased risk of newborn morbidity and mortality. Among different causes of LBW, anaemia during pregnancy is the one, which is occurred in each trimester of pregnancy worldwide[32–37].

The prevalence of anaemia among the delivered women was 16.11% (95% CI: 11.42, 21.78). The result in this study is low while we compared with a study done in Jimma, Ethiopia (27.4%)[38], Northwest Ethiopia (25.2%)[39], India (78.45%)[40], Egypt (72%)[41], and Turkey (27%)[42]. This variation might be due to eligibility criteria like pregnancy complicated with diabetics, preeclampsia, hypertension, HIV/AIDS, and malaria were considered in these studies but excluded in our study. In addition, participants' habits of consumption of vegetables (80.1%), fruit (78%)[43], and red meat (63%) were high. Besides, the regular antenatal follow-up with Iron and Folic Acid supplementation during pregnancy is also an asset[44,45]. All these factors were essential to prevent the occurrence of anaemia during pregnancy.

In this study, the prevalence of anaemia among newborns was 30.33% (95% CI: 24.20, 37.01) which was comparable to a study conducted in Brazil (32.6%)[46]. The possible reasons might be a similarity in socioeconomic status, dietary habits, lack of supplementation during pregnancy, and poor preconception and conception care.

The proportion of the LBW in the current study was 12.32%, (95% CI: 8.20, 17.53%). The finding of this study was comparable to the study done in Northern Ethiopia (10%)[37], Pakistan (10.6%)[47], Iran (9.5%)[48], Northwest Ethiopia (14.9%)[49], and Dessie, Ethiopia (15.6%)[50]. However, in this study, the prevalence of LBW was higher than in the study conducted in Northwestern Iran (6.8%)[51]. This might be due to the presence of maternal morbidity like anaemia secondary to inadequate intake of micro and macronutrients during pregnancy. In addition, maternal weight gain during pre-pregnancy is also the most crucial factor. Mothers' nutritional status is the most

significant determinant of newborn children's birth weight. In this study, anaemic mothers were more likely to deliver LBW than those who had no anaemia, which was consistent with a study finding in India[52].

The prevalence of LBW was lower as compared to a study conducted in Dilla Town, Southern Ethiopia (34.1%), Eastern Ethiopia (21%)[53], India (22%)[52], and Nigeria (20.3%)[54]. These might be due to sample size, dietary behaviours, and access to maternal health services on time, early ANC follow-up, preconception level of awareness, conception care, and household's asset or wealth status.

Here, being a newborn from a mother with anaemia alone will increase the risk of LBW by four times (COR = 4.19 (95% C:I 1.71, 10.30) as compared to their counterparts. Even this risk will increase more than 3-folds (AOR = 3.51 (95% CI: 1.29, 9.55) with all other contributing factors. The result indicates that prevention and controlling of anaemia alone will play a significant role to prevent the occurrence of LBW among newborns. The finding of this study is in line with the study conducted in Nigeria[54], Indonesia[55], Northern Ethiopia[56], Southern Ethiopia[57], and Dessie town, Ethiopia[58]. Another study in India also showed that maternal anaemia increases the incidence of LBW babies by 6.5%[59]. These might be due to the occurrence of anaemia secondary to hemodilution physiologically. Moreover, anaemia during pregnancy might be happening due to inadequate intake of nutrients, unable to take the recommended dose of Iron with folic acid supplementation during pregnancy, poor preconception and conception care, morbidity during pregnancy like helminthiasis, and poor diet quality. All these factors will directly or indirectly cause LBW.

In our study, newborn babies born from mothers who were unable to read and write were 10.94 times more likely (AOR = 10.94, 95% C:I 1.74, 68.58) to have LBW babies compared to those who attend above high school. Additionally, these mothers who attended secondary education were 8.06 times

(AOR = 8.06, 95% CI: 1.53, 42.36) more likely to give LBW newborn. This finding is consistent with a study conducted in Ethiopia[60]. But maternal education was not statistically significant in the other studies conducted in two different parts of Ethiopia[49,53]. The possible reasons might be the level of awareness related to preconception care, residence, and the socioeconomic status of being unable to read and write might not be different.

Finally, maternal anaemia had significant effects of on the newborn birth weight. This study's findings are similar to those study reported in China[61], India[40], Brazil[62], Nepal[63] Colombia[64], Eastern Ethiopia[65], and Southern Punjab, Asia[66]. This could be because of intrauterine growth restriction. In a low oxygen environment, the placenta proliferates and grows. When the maternal hemoglobin level falls, oxygen circulation in the fetal body is restricted. The fetal placenta is thus exposed to an oxidative stress environment (chronic hypoxia). As, a result Intrauterine fetal hypoxia impairs the transfer of oxygen/nutrient supply, resulting in fetal growth restriction and low birth weight[67,68] due to placental angiogenesis.

Limitation of the study

Since this is secondary data analysis, all determinant variables were not fully considered in this study. This study might not link specific macro and micro-nutrient deficiencies as a cause of anaemia, a particular type of anaemia, and difficult to establish a possible causality with LBW. Furthermore, this study did not include the assessment of subclinical conditions at the time of the primary data collection, and some essential laboratory tests (like stool exams) were not done.

Conclusion

The prevalence of anaemia among pregnant women was a moderate public health problem. The magnitude of LBW among newborns was relatively high. Anaemia during

pregnancy is the most significant predictor of LBW alone. Also, maternal educational status is one of the factors affecting LBW. According to this study, during routine care, treatment of anaemia is highly recommended with regular Iron Folic Acid supplementation. Also, regular nutrition education and counselling are essential based on the maternal educational status. The involvement of stakeholders in the treatment of anaemia is warranted to decrease the rate of LBW and its late consequence.

Go to:

Acknowledgements

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Go to:

Abbreviations

ANC	Antenatal care
AOR	Adjusted odds ratio
COR	Crude odds ratio
Hb	Haemoglobin
LBW	Low birth weight
SD	Standard deviation
WHO	World Health Organization

Author contributions

M.T.E.: made the draft of the proposal, and acquisition, analysis of data, and the interpretation or discussion, results of the manuscript; T.T.: worked on drafting the proposal, data analysis, interpretation, results, discussion, and draft and revise the final manuscript. T.E.: Edited the final manuscript. All the authors read and approved the final manuscript.

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Lampiran 7

Sonographic diagnosis of fetal head deflexion and the risk of cesarean delivery

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Abstract

Background: Malpositions and deflexed cephalic malpresentations are well recognized causes of dysfunctional labor, may result in fetal and maternal complications, and are diagnosed more precisely with an ultrasound examination than with a digital examination.

Objective: This study aimed to assess the incidence of malpositions and deflexed cephalic malpresentations at the beginning of the second stage of labor and to evaluate the role of the sonographic diagnosis of deflexion in the prediction of the mode of delivery.

Study design: Women in labor with a singleton pregnancy at term with fetuses in a cephalic presentation at 10 cm of cervical dilatation were prospectively examined. A transabdominal ultrasound was performed to assess the fetal head position by demonstrating the fetal occiput or the eyes. Deflexion was assessed by the measurement of the occiput-spine angle when the occiput was anterior or transverse and by qualitative assessment of the relationship between chin and thorax when the occiput was posterior. Transperineal ultrasound was performed in occiput posterior fetuses to discriminate between sinciput, brow, and face presentation. Maternal, labor, and neonatal parameters including maternal age, induction of labor, use of epidural, birthweight, arterial pH, and neonatal intensive care unit admission were recorded. Patients were divided into 2 groups according to the sonographic diagnosis of head deflexion. Adjusted odds ratios were calculated using multivariate logistic regression to determine the association between cesarean delivery and the 2 groups. In addition, labor and neonatal characteristics were compared between occiput anterior and occiput posterior-occiput transverse fetuses.

Results: Of the 200 women at the beginning of the second stage, the fetus was in occiput anterior position in 156 (78%),

transverse in 11 (5.5%), and posterior in 33 (16.5%) cases. Deflexion was diagnosed in 33 of 156 (21.2%) occiput anterior fetuses and 19 of 44 (43.2%) occiput posterior and occiput transverse fetuses. Cesarean deliveries were significantly associated with fetal head deflexion both in occiput anterior (P=.001) and occiput posterior (P<.001) fetuses. Sonographic diagnosis of fetal head deflexion was an independent risk factor for cesarean delivery both in occiput anterior (adjusted odds ratio, 5.37; 95% confidence interval, 1.819-15.869) and occiput posterior (adjusted odds ratio, 13.9; 95% confidence interval, 1.958-98.671) cases, and it was an independent risk factor for cesarean delivery regardless of the occiput position (adjusted odds ratio, 5.83; 95% confidence interval, 2.47-13.73).

Conclusion: The sonographic diagnosis of fetal head deflexion at the beginning of the second stage increases the risk of cesarean delivery.

Keywords: deflexion; intrapartum sonography; labor; malposition; malpresentation; occiput posterior position; ultrasound in labor; ultrasound in labor and delivery.

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Nipple Pain in Breastfeeding Mothers: Incidence, Causes and Treatments

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Abstract

Background: Persistent nipple pain is one of the most common reasons given by mothers for ceasing exclusive breastfeeding. We aimed to determine the frequency of nipple pain as a reason for consultation, the most common attributed aetiologies, and the effectiveness of the advice and treatment given.

Methods: All consultations at the Breast Feeding Centre of Western Australia (WA) were audited over two six-month periods in 2011 (n = 469) and 2014 (n = 708). Attributed cause(s) of nipple pain, microbiology results, treatment(s) advised, and resolution of pain were recorded.

Results: Nipple pain was one of the reasons for consultation in 36% of cases. The most common attributed cause of nipple pain was incorrect positioning and attachment, followed by tongue tie, infection, palatal anomaly, flat or inverted nipples, mastitis, and vasospasm. Advice included correction of positioning and attachment, use of a nipple shield, resting the nipples and expressing breastmilk, frenotomy, oral antibiotics, topical treatments, and cold or warm compresses. Pain was resolving or resolved in 57% of cases after 18 days (range 2-110).

Conclusion: The multiple attributed causes of nipple pain, possibly as a result of a cascade of events, suggests that effective early lactation management for prevention of nipple pain and early diagnosis and effective treatment are crucial to avoid early weaning.

Keywords: breastfeeding; diagnosis; nipple pain; treatments.

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