



Department:	Obstetrics and Gynecology (Ambulatory Care)		
Document:	Departmental Policy and Procedure		
Title:	Application of Fetal Scalp Electrode		
Applies To:	All Obstetrics and Gynecology Staff		
Preparation Date:	January 08, 2025	Index No:	L&D-DPP-057
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1. PURPOSE:

- 1.1 To outline indications and guidelines for applications of Fetal Scalp Electrode (FSE).

2. DEFINITONS:

- 2.1 **Fetal Scalp Electrodes**- is an electrical wire set into a sharp spiral metal tip and encased in a plastic sheath. Placement involves attachment of the electrode onto the fetal scalp for direct measurement of fetal heart rate (FHR) by electrical activity. The tip attaches about 2mm onto the scalp skin covering the bony portion of the fetal head.

3. POLICY:

- 3.1 Obtain an accurate recording of the Fetal Heart Rate especially when external monitoring tracings are unsatisfactory due to loss of contact.
 - 3.1.1 Obtain FHR recording of twin (1) in labor following rupture of membranes.
 - 3.1.2 Accurately record FHR when abdominal recording displays an abnormal pattern.
- 3.2 Verbal consent must be obtained from the patient prior to application.

4. PROCEDURE:

- 4.1 Preparation:
 - 4.1.1 Obtain consent from the woman and document verbal consent has been obtained.
 - 4.1.2 Ensure privacy.
 - 4.1.3 Ensure the woman's bladder is empty.
 - 4.1.4 Establish the membranes are ruptured prior to application of the FSE.
 - 4.1.5 Establish there are no risk factors prior to application.
- 4.2 Applying the FSE:
 - 4.2.1 Place patient in lithotomy position.
 - 4.2.2 Perform a vaginal examination to confirm:
 - 4.2.2.1 The membranes are ruptured.
 - 4.2.2.2 The identification of the presenting part.
 - 4.2.2.3 There is no cord presentation.
 - 4.2.2.3 The position for application is not over the fontanelles, face or genitalia.
 - 4.2.2.3 Using an aseptic technique, remove the FSE from its package leaving the wire locked in the retention notch at the top of the FSE.
 - 4.2.2.3 Insert the FSE until the presenting part is contacted and ensure the guide tube end is held flat against the presenting part.
 - 4.2.2.3 Pull the grip out from the outer guide tube enough to release the protection tap from the guide tube and then push the grip back in until the spiral tip contacts the presenting part.

- 4.2.2.3 Rotate the handle grip clockwise (approx. 1 full turn) until milk resistance indicates full attachment. (DO NOT over rotate).
 - 4.2.2.3 Release the wires from the retention notch and grasp the guide tube and slide both the guide and drive tubes off the wires.
 - 4.2.2.3 Connect the FSE to the leg adaptor, monitor cable and CTG inlet.
 - 4.2.2.3 Do not scrub until the electrode is attached to the CTG, is working correctly and recording.
- 4.3 Removing the FSE
- 4.3 Pull the FS connector out of the leg adapter. Grasp the electric wires as close as possible to the fetal presenting part, turning them counter clockwise until the spiral tip is free from the fetal skin. DO NOT pull the FSE wires apart.
 - 4.3 Inspect the spiral tip to ensure that it is still attached to the FSE hub. If the tip has separated from the hub and remains embedded in the presenting part remove it using an aseptic technique.
 - 4.3 REMINDER the FSE must be removed prior to performing a caesarean section.
- 4.4 Post Procedure:
- 4.4.1 Documentation should include:
 - 4.4.1.1 The indication and use of the FSE in the maternal progress notes.
 - 4.4.1.2 Date and time of FSE application.
 - 4.4.1.3 Degree of effacement.
 - 4.4.1.4 Cervical dilatation.
 - 4.4.1.5 Color of amniotic fluid.
 - 4.4.1.6 Station and position of P/P (presenting part).
 - 4.4.1.7 FHR pattern following application.
 - 4.4.1.8 Legible signature.
 - 4.4.2 Notify the pediatric team if there are any abnormalities of the insertion site on the newborn after delivery (e.g. lacerations or infections)
 - 4.4.3 Advise the mother to examine the scalp or buttocks of her newborn frequently until healed and to report any abnormalities.
 - 4.4.4 Dispose of single use items and clean monitor cable.

5. MATERIAL AND EQUIPMENT:

- 5.1 Vaginal examination pack
- 5.2 Sterile water based lubricant
- 5.3 Sterile gloves
- 5.4 Antiseptic cream
- 5.5 FSE
- 5.6 Adhesive tape
- 5.7 Cardiotocograph (CTG) monitor

6. RESPONSIBILITIES:

- 6.1 Physician
- 6.2 Nurses
- 6.3 Midwives

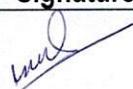
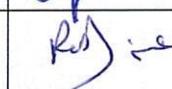
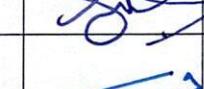
7. APPENDICES:

- 7.1 History and Examination Form
- 7.2 Partogram

8. REFERENCES:

- 8.1 Acker, D (2007) Clinical Pearls in Application of Electronic Fetal Heart Rate Monitoring.
- 8.2 ACOG (2005) IntrapartumFetal Heart Rate Minitoring. ACOG Practice Bulletin Number 70. Obstetrics and Gynecology Vol. 106, No. 6, December, 2005.
- 8.3 RANZCOG (2002) Clinical Guidelines: Intrapartum, Fetal Surveillance.
- 8.4 Thacker, S., Stroup, D and Peterson H. (2005) Continous Electronic Fetal Heart Monitoring During Labor. (Cochrane Review) In: The Cochrane Library, Issue 1.
- 8.5 King Edward Memorial Hospital (2008) Clinical Guidelines- 5.6.1. CorometricFetal Scalp Electrode. Accessed on 04 / 03 / 11.
- 8.6 MOH, Guidelines for Obstetrics and Gynecology, Clinical Policies and Procedures, 2013.

9. APPROVALS:

	Name	Title	Signature	Date
Prepared by:	Ms. Waad Al Anizi	Head Midwife of Labor&Delivery Room		January 08, 2025
Prepared by:	Dr. Abdalla Mohamed Albasha	Obstetrician and Gynecologist		January 08, 2025
Reviewed by:	Dr. Mohannad Yaghmour	Head of the Department		January 12, 2025
Reviewed by:	Mr. Sabah Turayhib AlHarbi	Director of Nursing		January 13, 2025
Reviewed by:	Dr. Thamer Naguib	Medical Director		January 14, 2025
Reviewed by:	Mr. Abdulelah Ayed AlMutairi	QM&PS Director		January 15, 2025
Approved by:	Mr. Fahad Hezam AlShammari	Hospital Director		January 22, 2025



KINGDOM OF SAUDI ARABIA  وزارة الصحة Ministry of Health	رقم الملف الطبي: <input style="width: 100px;" type="text"/> MRN: <input style="width: 100px;" type="text"/> الاسم: <input style="width: 100px;" type="text"/> Name: <input style="width: 100px;" type="text"/> الجنسية: <input style="width: 100px;" type="text"/> Nationality: <input style="width: 100px;" type="text"/> العمر: <input style="width: 100px;" type="text"/> Age: <input style="width: 100px;" type="text"/> سن Years <input style="width: 100px;" type="text"/> شهر Months <input style="width: 100px;" type="text"/> يوم Days مستشفي: <input style="width: 100px;" type="text"/> Hospital: <input style="width: 100px;" type="text"/> المحافظة: <input style="width: 100px;" type="text"/> Region: <input style="width: 100px;" type="text"/> الوحدة: <input style="width: 100px;" type="text"/> Dept./Unit: <input style="width: 100px;" type="text"/> الجنس: <input type="checkbox"/> Male <input type="checkbox"/> Female Gender: <input style="width: 100px;" type="text"/>
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OBSTETRIC HISTORY AND ASSESSMENT FORM

Booking Date: _____ / _____ / _____ Telephone No.: _____

Consultant: _____ Referred By: _____

LMP: / / E.D.D.: / /
MENSTRUAL CYCLE: / REGULAR: YES NO PILL WITHDRAWAL: YES NO

MEDICAL HISTORY:

Give details of relevant diseases

- | | | | | | |
|--|------------------------------|-----------------------------|--------------------|-------------------------------|---|
| <input type="checkbox"/> Diabetes | <input type="checkbox"/> YES | <input type="checkbox"/> NO | IF Yes, Treatment: | <input type="checkbox"/> Oral | <input type="checkbox"/> Insulin; dose: _____ |
| <input type="checkbox"/> Hypertension | <input type="checkbox"/> YES | <input type="checkbox"/> NO | IF Yes, Treatment: | _____ | |
| <input type="checkbox"/> Cardiac Disease | _____ | | | | |
| <input type="checkbox"/> Pulmonary Disease | _____ | | | | |
| <input type="checkbox"/> Renal Disease | _____ | | | | |
| <input type="checkbox"/> Blood Disease | _____ | | | | |
| <input type="checkbox"/> Infertility | _____ | | | | |
| <input type="checkbox"/> Others | _____ | | | | |

SURGICAL HISTORY:

ALLERGIES: YES NO IF Yes, Specify: _____

ALLERGIES: ☐ YES

BLOOD TRANSFUSION: YES NO IF Yes, When? -

FAMILY HISTORY

- Diabetes Multiple pregnancy Others
 Hypertension Malformation

GDOH-OUF-OHA-033

ISSUED DATE:09/02/2013

1 OF 2

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Name: _____		الاسم: _____	MRN: _____	رقم الملف الطبي: _____
EXAMINATION:				
Height: _____ cm.			Weight: _____ kg.	
Thyroid: <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal Specify: _____		Heart: <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal Specify: _____		
Breast: <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal Specify: _____		Lungs: <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal Specify: _____		
Veins: _____		Abdomen: _____		
ANTENATAL INVESTIGATIONS:				
Hgb: _____ Date: / /		VDRL: <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Reaction: _____		
ABO Group: <input type="checkbox"/> A <input type="checkbox"/> B RHEUS: <input type="checkbox"/> (-) <input type="checkbox"/> (+) <input type="checkbox"/> AB <input type="checkbox"/> O		Toxoplasmosis: <input type="checkbox"/> Negative <input type="checkbox"/> Positive <input type="checkbox"/> Titer		
Indirect Coombs Test(ICC): At Booking: At 32 weeks: _____		HBs Ag: <input type="checkbox"/> Negative <input type="checkbox"/> Positive		
Blood Sugar: <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal		Rubella: <input type="checkbox"/> Immune <input type="checkbox"/> Non-immune		
OTHER INVESTIGATIONS:				
ULTRASOUND FINDING:				
Booking USS:				
Follow-up USS:				
RISK CARD:				
Reproductive History		Medical History	Current Pregnancy	
<input type="checkbox"/> Age > 35 yrs		<input type="checkbox"/> Cardiac Disease	<input type="checkbox"/> Multiple pregnancy	
<input type="checkbox"/> Parity ≥ 6		<input type="checkbox"/> Chronic hypertension	<input type="checkbox"/> Placenta previa and/or APH	
<input type="checkbox"/> Abortions ≥ 3		<input type="checkbox"/> IDDM	<input type="checkbox"/> Anemia < 8gm %	
<input type="checkbox"/> PTL		<input type="checkbox"/> Chronic renal disease	<input type="checkbox"/> PET	
<input type="checkbox"/> Baby ≥ 4.5 kg		<input type="checkbox"/> Pulmonary disease	<input type="checkbox"/> IUGR	
<input type="checkbox"/> Baby ≤ 2.5 kg		<input type="checkbox"/> Sickle cell disease	<input type="checkbox"/> GDM	
<input type="checkbox"/> SB or NND		<input type="checkbox"/> SLE	<input type="checkbox"/> Preterm PROM	
<input type="checkbox"/> Eclampsia		<input type="checkbox"/> Thyroid disease	<input type="checkbox"/> Hydramnios or oligohydramnios	
<input type="checkbox"/> Scarred uterus		<input type="checkbox"/> Epilepsy	<input type="checkbox"/> Rh immunization	
<input type="checkbox"/> PPH		<input type="checkbox"/> Thromboembolic disease	<input type="checkbox"/> Malpresentation at term	
PHYSICIANS NAME : _____ SIGNATURE: _____				
NURSE # 1: _____				
NURSE # 2: _____				

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ISSUED DATE: 09/02/2013

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OXYTOIN	0	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
DROPS/ MINUTE																								

5	Contractions 4	Per 3	Minutes 2	1	200	190	180	170	160	Blood 150	Pressure 140	and 130	pulse 120	110	100	90	80	70	60	URINE	PROTEIN	ACETONE	GLUCOSE	TEMPERATURE