LUMBOSACRAL DIMPLE

This LOP is developed to guide safe clinical practice in Newborn Care Centre (NCC) at The Royal Hospital for Women. Individual patient circumstances may mean that practice diverges from this Local Operations Procedure (LOP).

INTRODUCTION
Sacral dimple is a common finding in newborn examination. A small proportion may be associated with occult or closed spinal dysraphism and failure to diagnose can lead to tethered cord syndrome. Tethered cord syndrome is the term used for occult dyraphism when the symptoms arise due to a tethered cord which can force the spinal cord to stretch as they grow leading to progressive spinal cord damage if untreated.

1. AIM
- To differentiate the occult spinal dysraphism (OSD) from simple sacral dimple
- To appropriately investigate and arrange follow up for infants with OSD

2. PATIENT
- Newborns

3. STAFF
- Medical and nursing staff

4. EQUIPMENT
N/A

5. CLINICAL PRACTICE

Low Risk Category (Imaging not required)
- Simple Dimple (<5mm deep and located within 2.5cm from the anal verge)
- Coccygeal pits (located within gluteal cleft, oriented caudally or straight down)
- Port Wine Stain or Telangiectases

Intermediate Risk Category (Perform ultrasound if age <6 months or MRI if age ≥6 months)
- Atypical Dimple (Deep (>5mm) and located 2.5cm or more from the anal verge)
- Infantile Hemangioma near lumbosacral area less than 2.5cm in size
- Hypertrichosis which is well defined and located in lumbosacral area (not universal hypertrichosis)

High Risk Category (Referral to Spina Bifida clinic, ultrasound and/or MRI after consultation with Spina Bifida clinic)
- 2 or more cutaneous stigmata
    - Lipoma
    - Pseudo or true tail
    - Aplasia cutis and congenital scars over lower spine
    - Dermoid cyst or sinus
    - Infantile Hemangioma 2.5 cm or more in size

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Management of Intermediate Risk Category and Abnormal Imaging

1. Review spinal ultrasound result whilst the baby is in hospital or as an outpatient
2. If Ultrasound is abnormal:
    a. Organise appointment in Spina Bifida clinic (CNC phone ext 21595)
    b. May inform Neurosurgery Registrar and CNC Paediatric Neurosurgery (Pager 47165) and Urology Fellow or Registrar about any intervention needed prior to appointment in Spina Bifida clinic
    c. Arrange for a Urinary Tract Ultrasound at 1 month of age
    d. The decision not to send to Spina Bifida clinic should be at neonatologist's discretion

6. DOCUMENTATION

- eMR

7. EDUCATIONAL NOTES

Why look for OSD?

- If untreated OSD can lead to neurological sequelae in the lower limbs, urinary and bowel symptoms.
- In tethered Cord syndrome, cord traction can occur as a result of growth which may impair microcirculation to the cord leading to progressive cord ischaemia.
- Early Surgical intervention for spinal lesions may prevent irreversible neurological damage
- When OSD is the primary finding at least 50% are associated with cutaneous marker.
- It is thought that between 3-8% of patients with significant skin lesions over the spine will have an underlying OSD. A combination of 2 or more cutaneous lesions has been shown to be the highest indicator of OSD.

Which Imaging to choose?

Spinal Ultrasound

- Advantages
    - Best undertaken within 3 months of age, generally earlier the better
    - After 6 months not possible as spinal ossification occurs and quality of examination becomes very poor
    - Less expensive
    - Portable and don't require anaesthesia
    - First line investigation
- Disadvantages
    - Can miss small amounts of fat within the filum terminale and small dermal sinus tracts
    - Imaging abnormalities seen
    - Poor visualisation of bony structures
- Ultrasound anomalies
    - Position of conus (lower in tethered cord syndrome; conus should not be lower than L2 at any age)
    - A thickened filum or a lipoma
    - Normal mobility of nerve roots in the thecal sac

Spinal MRI

- Advantages
    - Better visualisation of bony structures
    - Identify fusion defects and segmentation anomalies such as hemivertebra
- Disadvantages
    - Expensive
    - Not portable
    - Requires anaesthesia

LUMBOSACRAL DIMPLE cont'd

8. RELATED POLICIES/PROCEDURES/CLINICAL PRACTICE LOP

- Nil

9. RISK RATING

- Low

10. NATIONAL STANDARD

- Standard 1 Governance for Safety and quality in Health Service Organisation

11. ABBREVIATIONS AND DEFINITIONS OF TERMS

NCC	Newborn Care Centre	OSD	Occult Spinal Dysraphism
LOP	Local Operations Procedure	CNC	Clinical Nurse Consultant

12. REFERENCES

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REVISION & APPROVAL HISTORY

FOR REVIEW :