

Sacral Dimples Identified on postnatal check (NIPE) - Paediatric Full Clinical Guideline - Joint Derby & Burton

Reference no.: NIC GI 25

1. Introduction

Sacral dimples have a prevalence of approximately 4%¹, and therefore are a commonly encountered abnormality during a NIPE examination.

Providing a structured approach to the assessment and investigation of these aims to reduce unnecessary healthcare costs, improve diagnostic yield of ultrasound scans, and reduce unwarranted worry for parents of newborns in whom there is unlikely to be any abnormality.

2. Purpose and Outcomes

To provide a standardised approach and framework to a common neonatal problem encountered on the NIPE, and to aid decision making for further investigations if necessary.

3. Key Responsibilities and Duties

The NIPE examination will be performed by an appropriate person; see NEONATE/03:2017/N4 for definition of this.

On identifying a sacral dimple, the examining clinician must pay particular attention to the other features of the examination as listed below, discuss where relevant with a senior colleague with experience in managing sacral dimples, and ensure appropriate follow-up is arranged.

Abbreviations

NIPE: Newborn and Infant Physical Examination

USS: ultrasound

MRI: Magnetic Resonance Imaging

OPD: outpatient department

NTD: neural tube defect

Examination

A *simple* sacral dimple can be defined as a single pit or dimple in the midline sacral region, measuring <5mm in diameter, located <2.5cm above the anus, and with no other cutaneous or subcutaneous abnormalities. Examine baby prone over a lap or other soft surface enabling gentle parting of the buttocks to expose relevant area clearly.

Red flags are therefore²:

- Diameter: >5mm in diameter
- Location: >2.5cm from anus
- Cutaneous stigmata: skin tags, tufts of hair, haemangioma, subcutaneous lipoma
- Unable to visualise base of dimple (possibility of sinus tract) ensure examined prone over a lap & buttocks parted
- Abnormal lower limb neurology

Investigation

The aim of USS is to rule out spinal dysraphism, including tethered cord syndrome or meningocele/myelomeningocele³.

USS remains the best first line imaging tool, if there is a suspicion of abnormality the patient can be referred for more detailed imaging, usually MRI.

Multiple studies have shown there is no correlation between a simple sacral dimple *without* red flag features, and abnormalities of the spinal cord on USS or MRI^{4,5}, and that there is a correlation between the number of red flag features and the likelihood of spinal cord abnormalities being found⁶.

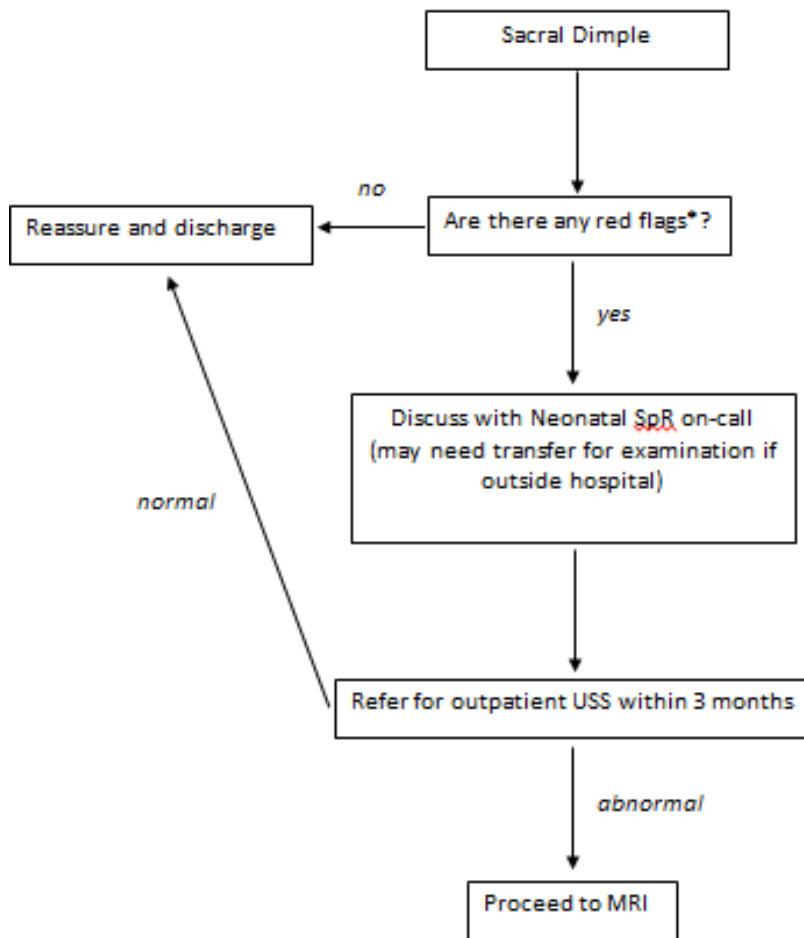
It is therefore generally considered safe to reassure parents of a newborn with a simple sacral dimple that it is unlikely to be associated with any abnormalities and that routine imaging is not clinically indicated.

Management

If an abnormality is found, the child should be discussed with the neonatal registrar on-call. For Burton patients outside Queen's Hospital the examining midwife should speak to the paediatric registrar who may request transfer of the patient for more detailed examination).

After discussion a referral should be made for OPD USS within 3 months of birth. USS is not usually performed under 1 month of age, as this may lead to false positives⁷. However it needs to be requested as soon as possible as inadequate visualisation may result after 8 weeks of age as the spine begins to ossify. Discuss with a Paediatric Radiology if any doubt.

Decision making process



- *Red flags:**
- Diameter: >5mm in diameter
 - Location: >2.5cm from anus
 - Cutaneous stigmata: skin tags, tufts of hair, haemangioma, subcutaneous lipoma
 - Unable to visualise base of dimple (possibility of sinus tract)
 - Abnormal lower limb neurology

4. References (including any links to NICE Guidance etc.)

- ¹ Weprin BE, Oakes WJ. Coccygeal pits. *Pediatrics*. 2000;105: e69 – e73
- ² VM, Desai NS. Occult spinal dysraphism in neonates: assessment of high-risk cutaneous stigmata on sonography. *Am J Roentgenol* 1998;171:1687-92.
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- ⁴ Kucera JN, Coley I, O'Hara S, Kosnik EJ, Coley BD. The simple sacral dimple: diagnostic yield of ultrasound in neonates. *Pediatr Radiol*. 2015;45(2):211-216. doi:10.1007/s00247-014-3110-1
- ⁵ Robinson AJ, Russell S, Rimmer S. The value of ultrasonic examination of the lumbar spine in infants with specific reference to cutaneous markers of occult spinal dysraphism. *Clin Radiol*. 2005;60(1):72-77. doi:10.1016/j.crad.2004.06.004
- ⁶ McGovern M, Mulligan S, Carney O, Wall D, Moylett E. Ultrasound investigation of sacral dimples and other stigmata of spinal dysraphism. *Arch Dis Child*. 2013;98(10):784-786. doi:10.1136/archdischild-2012-303564
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5. Documentation Controls

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In Consultation with: Dr Anthony Choules (Consultant Paediatrician, Queen's Hospital Burton) Dr Jonathan Crookdale (Consultant Paediatric Radiologist, Royal Derby Hospital)				
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