1. Solitary, horny projection on hand

A middle aged motor mechanic presented with a horny projection on right little finger of two years duration. The lesion was asymptomatic except for physical inconveniences. On examination, a 0.5 cm long, non-tender, firm, skin coloured growth with a rough surface was found projected vertically from the ulnar border of right little finger (Figure1). The base of the lesion was surrounded by a raised collarette of skin. Hematoxylin and eosin stained section of excision biopsy is shown in Figure 2.

What is the Diagnosis?

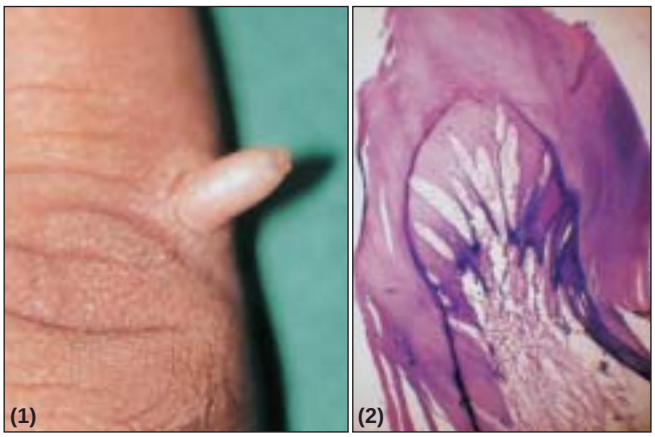

Figure 1 & 2: (1) Solitary horny projection with a collarette of raised skin at the base. (2) H&E stained histopathological section (X 40).

2. Pedunculated lesion over lower back

A seven year boy presented with asymptomatic pedunculated lesion over the lower back since birth. He had loss of sensation with recurrent ulcers over the left leg and foot for the last three years. He also had urinary and fecal incontinence. There was no history of hypopigmented patches, spinal injury, drug intake, diabetes or tuberculosis. Family history was unremarkable. Clinical examination revealed a pedunculated nodule overlying $L_{4\text{-}5}$ region (Figure 1), with a soft swelling underneath it, along the left paravertebral column. Cough impulse was present. A lateral X-ray of the spine is seen in Figure 2.

What is your diagnosis?

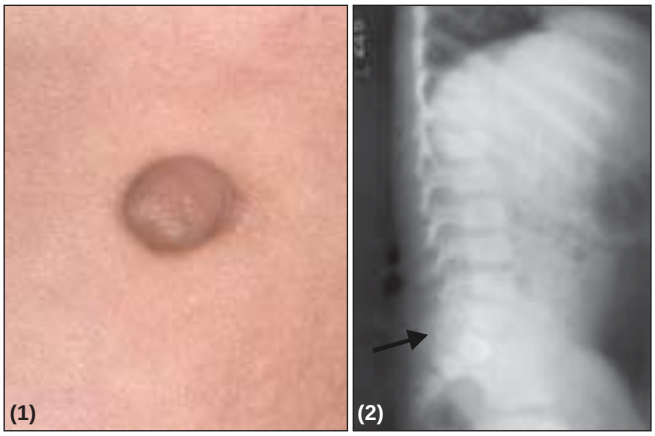

Figure 1 & 2: (1) Pedunculated tail-like nodule over back (2) Lateral View showing absence of spinous processes below L_4 with soft tissue shadow (arrow mark).

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Answer to Quiz No. 2

Diagnosis: Spinal dysraphism with tail-like projection

DISCUSSION

The patient also had three trophic ulcers over the sole of left foot with multiple atrophic scars over left leg. Nervous system examination showed loss of sensation for pain, touch and temperature below L_1. Motor system examination showed mild wasting of muscles of left thigh and leg. Knee and ankle jerks were diminished on left side. Anal sphincter was lax. Routine hematological and urine examinations were normal. Blood VDRL was non reactive. Serology for HIV 1 and 2 was negative. Blood glucose, liver function tests and renal parameters were normal. X-ray L-S spine showed spina bifida below L_4. X-ray left foot showed partial resorption of 3rd, 4th and 5th phalanges. Ultrasound abdomen was normal. MRI showed tethered cord with myelomeningocele.

Spinal dysraphism refers to incomplete fusion or malformations of structures in the dorsal midline of the back, particularly congenital abnormalities of the vertebral column and the spinal cord.[1] The term therefore includes spina bifida and other abnormalities such as those in which cutaneous ectoderm is carried deeply, causing dermoid cysts or dermal sinuses to form.[2] A polygenic mechanism including genetic factors is implicated as causative.[3] High risk cutaneous markers for spinal dysraphism include atypical dimples, hemangiomas, upraised lesions (i.e. masses, tails and hairy patches) and multiple cutaneous stigmata.[4] Occult spinal dysraphism may occur in 20% of all individuals of which only a small percentage will have a significant associated neurological defect.[3] Occult spinal dysraphism is associated with cutaneous signs in more than 50% of instances.[1]

The age of onset of neurologic symptoms in occult spinal dysraphism ranges from birth to 76 years, the average being three years.[1] Myelomeningocele is the most serious form of spina bifida, while occulta the least. Lesions preventing the ascent of the cord which occurs during normal growth, can lead to undue traction on the lower end of the cord and cauda equina with resultant neuro-trophic changes.[2] Urinary or fecal incontinence, recurrent urinary infections, muscle atrophy, foot deformities, weakness, pain or decreased sensation may eventually develop. Magnetic resonance imaging (MRI) is the best investigational tool[5] although X-ray, ultrasound can be used for screening. Early detection and surgical intervention can prevent the disabling irreversible neurological deficits.

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