

Prepuccial Epstein Pearls: Revisited

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ABSTRACT

Milia are minute follicular epidermal cysts, commonly found over the cheeks, nose, upper lip, forehead, and rarely over the areolae and genitalia. Prepuccial milia (Prepuccial Epstein pearl), are pearly white papules, 1-2mm in size found on the prepuce or shaft of the penis in a male new born. They are benign in nature and almost always disappear within a few weeks. Prepuccial milia evoke a lot of concern and anxiety to the parents. Physician and child healthcare providers should be aware of this condition to avoid unnecessary intervention.

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INTRODUCTION

In the neonatal period a number of physiological changes can be appreciated on the skin. Most of these conditions are physiological and transient. Their differentiation from other pathological conditions is critical for the neonatologist/paediatrician and dermatologists for prognosis, and for parents to care and seek appropriate medical advice. One of these conditions is milia.

Milia are minute follicular epidermal cysts noted in about 40% newborns.^[1] They are commonly found over the cheeks, nose, upper lip, forehead, and rarely over the areolae, limbs and genitalia.^[2] Milia, when present over the palate and alveolar ridges are called Epstein's pearls and Bohn's nodules respectively.^[1] Single large milia is often described as pearl.^[2] Presence of milia on the prepuce has been reported as Prepuccial Epstein pearl by many authors. Two prospective studies have reported that prepuccial Epstein pearls are found in 7.3% to 18.2% male newborn infants though western literature claims it be more common^[3,4,5]. Prepuccial milia are pearly white to yellow papules, 1-2mm in size found on the prepuce or on the median raphe of the shaft of the penis. They are most commonly found on the tip of the fore-skin at 6o'clock position but may be present few millimetres proximal to the fore skin.

Prepuccial milia presents as a single white pearly papule though one case with two prepuccial milia, 3 mm apart, has also been reported.^[6] They are formed due to plugging of the pilosebaceous or eccrine ducts and contain keratin like substance unlike smegma pearls that consists of smegma.^[7]

They are benign in nature and almost always exfoliate and disappear on their own within a week, or may

persist up to 3 weeks, without leaving any scar or pigmentation. Persistence of milia at unusual sites or widespread distribution may be seen in oro-facial-digital syndrome, hereditary trichodysplasia, pachyonychia congenita and dystrophic epidermolysis bullosa.^[8] In few case reports on Prepuccial Epstein pearls the infants were healthy on clinical examination; long term follow up was not available.

Close differentials of prepuccial milia include smegma pearl, prepuccial cyst and prepuccial median raphe cysts. They are easily differentiated clinically. Smegma pearls presents as a painless single or multiple whitish-yellow pearly nodule over the glans in uncircumcised boys due to collection of smegma between the base of the glans and the attachment of the prepuccial membrane with the glans. They resolve spontaneously.^[9] Prepuccial cyst is a nodular swelling below the skin of glans due to collection of dead skin and requires no active intervention.^[7] Median raphe cyst are midline-developmental abnormality that occur as a solitary freely movable nodule on the ventral surface of the penis.^[10,11] A similar sounding condition is pearly penile papule that develop after puberty and present with one or two rows of skin coloured papules on the corona of glans.^[12]

Prepuccial milia evoke a lot of concern and anxiety to the parents.^[6] This can lead to unnecessary mental agony especially to the mother which may affect the maternal hormones like oxytocin resulting in failure to breastfeed if not counselled properly. Physician and child health care providers who are not aware of this benign condition may over treat it with unnecessary investigations, puncturing, and antibiotics etc. Prepuccial milia is a self resolving physiological

condition requiring no intervention. But timely identification and counselling of the parents explaining the benign nature of this condition are imperative for management.



Figure 1 with permission of the authors. [6] Single prepuccial epstein pearl.



Figure 2 with permission of the authors. [6] Two Prepuccial Epstein pearls.

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