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Amnion Nodosum- A Rare Care Report

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Abstract: Amnion nodosum (AN) is an entity characterized by multiple, localised lesions of amnion, composed of masses of squamoid cells and fibrin adherent to amniotic mesoderm. These nodules were previously called *Amnionknötchen* (amniotic nodules) (1). Herewith presenting a rare case of an incidental amnion nodosum reported in a 25 year old primi presenting with severe oligohydromnios.
Keywords: Amnion nodosum, oligohydromnios, incidental.

INTRODUCTION

Amnion nodosum (AN) is a lesion of placenta showing numerous small nodules on the amnion of the chorionic plate, placental membranes, or the umbilical cord [1]. Landing first used prior to 1950, the term Amnion nodosum(AN), characterized by plaques on the fetal surface of the amnion containing squamous cells [2]. Grossly, the lesion shows multiple, circumscribed, firm, round to ovoid, shiny, raised, yellow nodules, ranging in size from 1 to 5 mm on the amniotic surface [3,4]. Microscopy shows varying proportions of squamous cells (may be keratinized) enmeshed in amorphous degenerative acidophilic debris [5, 6]. They may be found on the amniotic surface or rarely embedded in amniotic mesoderm. The amniotic epithelium may be seen as a complete or as an interupted cell layer.

The lining epithelium is identical to that of adjacent normal amnion and occasionally showing hyperplastic changes [7]. Ultra-structurally, these nodules are composed of tightly packed bundles of high electron density fibrillary material and various kinds of cellular elements. The basement membrane may be multilaminated under the amniotic epithelium [7].The microscopic and ultrastructural features suggest that AN represents cellular elements deposits from fetal skin along with secondary degenerative changes.

CASE PRESENTATION

25 year old primi, presenting with severe oligohydramnios in third trimester. The patient was a known case of hypothyroidism. Biopsy of chorion and amnion was sent for histopathological examination. Section were processed routinely and stained with H&E stain.

We received the membranes as two gelatinous grey white soft tissue fragments measuring 16 x 4cm and 11x 4 cm. the amnion showed few grey white nodules measuring 2mm -5mm in diameter. Tissue was processed and slides stained with H&E.

MICROSCOPY

Sections from amnion show squamoid cells forming nodules in some places. Some nodules are fibrotic. Rest of the amnion is lined by amniotic epithelium.

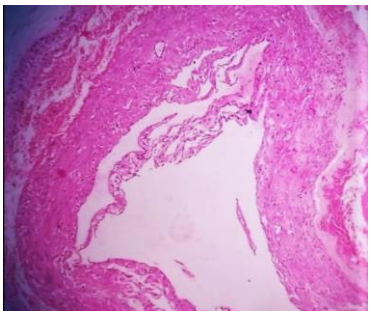

Fig-1: Low power view of squamoid cells.(AN 10x)

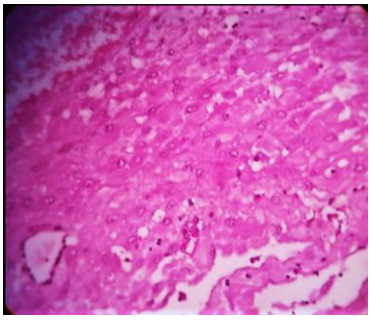

Fig 2: High power view of squamoid cells with abundant eosinophilic cytoplasm with vescicular nucleus in a fibrinous material. (AN 40x)

DISCUSSION

Amnion nodosum, a rare condition shows amnionic surface studded with irregular, 1–5 mm, and yellowish elevated nodules. Although they can occur anywhere on amnionic surface, the nodules are concentrated on the chorionic plate, around the insertion of umbilical cord; microscopy shows the nodules to be composed of eosinophilic, amorphous material containing cells with hair fragments. The amniotic epithelium may or may not be present beneath the nodules while a layer of amniotic epithelium is present over its surfaces. Amnion nodosum is associated with reduced amniotic fluid- oligohydramnios. The debris from the fetal epidermis, oral cavity, gastrointestinal tracts and urinary tracts or the amnion itself gets concentrated when amnionic fluid is less and deposited. The cause of oligohydramnios is variable. The cause of oligohydramnios includes fetal urinary tract abnormality like renal agenesis, urinary tract obstruction or IUGR. Amnion nod sum is a reliable indicator of oligohydramnios that should prompt an investigation for fetal abnormalities known to accompany it, -potters sequence-urinary tract anomalies and pulmonary hypoplasia [8].

Two gross lesions that are differential diagnosis are squamous metaplasia and sub chorionic fibrin deposits of the amnion. In the former, there is plaque caused by diffuse thickening of the amnion and the plaque cannot be separated from the membrane while in the later, the amnion can be made to slide over these deposits. The term *squamous metaplasia* is a misnomer as the amnion is an immature squamous epithelium which is continuous with the fetal skin. The histologic appearance of squamous metaplasia shows stratified squamous epithelium with focal keratinization [8].

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