DIAGNOSIS OF HYDATID CYST PAROTID GLAND BY FINE NEEDLE ASPIRATION CYTOLOGY (FNAC)
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ABSTRACT
Fine Needle aspiration of parotid gland swellings is commonly done as a first line investigation. Fine needle aspiration of one such cystic lesion in a 45 years old female was performed. The cytopathological appearance of the aspirate turned out to be typical of Hydatid Cyst. The case is reported with review of literature.

Keywords: Cytomorphology, FNA, Hydatid Cyst, Parotid gland.

INTRODUCTION
The tissue infestation of Echinococcus granulosus leads to hydatid cyst, mostly seen in liver and lungs but can be found anywhere. The definitive hosts of the parasite are dogs, whereas the intermediate hosts are sheep and other animals with humans as accidental intermediate hosts. This is an endemic disease that particularly affects people who live in rural areas in intimate contact with cattle. Since the introduction of fine needle aspiration (FNA) by Martin and Ellis the procedure has gained a lot of importance as a diagnostic tool. Almost every site of the body is being subjected to this procedure, directly or stereo-tactic. The FNA for parotid gland lesions is a routine procedure. Hydatid disease is very rarely diagnosed on FNA. The disease in parotid gland is very rare. In our FNA clinic one case presented with a cystic lesion of parotid gland, was aspirated which on cytomorphology turned out to be typical of hydatid cyst. The case is reported with review of literature.

CASE REPORT
A 45 year old female patient presented with swelling of right parotid area. The fine needle aspiration was done at FNA clinic of Histopathology Department, Army Medical College, Rawalpindi, Pakistan. About 0.5 ml light brown coloured fluid material was aspirated. Both air dried and wet fixed slides were prepared. The air dried slides were stained by May-Grunwald Giemsa (MGG), and wet fixed by haematoxylin & eosin (H&E).

On microscopy, numerous hooklets and scoleces were found. No inflammatory cells were seen. The scoleces were seen as round to oval structures. Some of the scoleces had one to two rows of characteristic radially arranged hooklets (figure 1). Numerous triangular or sickle-shaped hooklets, about 20-40 um in size were also seen scattered as isolated unit. The closer view of hooklets is given in the inset of fig-1. Some scolices showed flame cells and were without hooklets. Based on these typical cytological findings, a diagnosis of hydatid cyst of parotid gland was made.

DISCUSSION
It was a landmark development in history when Martin and Ellis1 and almost at the same time Steward2 published their studies on the diagnostic value of FNA. The FNA of the parotid gland is routinely done as first line
investigation\textsuperscript{3}. Mostly it is done for the tumours of parotid gland. Some cystic tumours/lesions may also be subjected to FNA\textsuperscript{4}. The cystic lesions of liver, lung, which later may turn out to be hydatid cyst are definitely suspected\textsuperscript{5}. Some case reports of cytology of hydatid cysts of rare sites are also there\textsuperscript{6,7} but it is quite rare to find hydatid cyst in the parotid gland. In the aspirate of hydatid cyst mostly scoleces and hooklets are identified. The hooklets appear as curved structure mostly seen as negative image and may appear as bright curved structure under polarized light\textsuperscript{5-7}.

The purpose of reporting this case is that a successful diagnostic yield of scoleces and hooklets can be obtained in FNAC of hydatid. Therefore a cytological diagnosis can be made, by experienced hands and then definitive treatment can be instituted.

CONFLICT OF INTEREST
The authors of this study reported no conflict of interest.

AUTHORS CONTRIBUTION
Shahid Jamal, diagnosis and Aiza Saadia, M Amjad Khan, write up.

REFERENCES