AN UNUSUAL CASE OF PSEUDOMUCINOUS CYSTADENOMA

by

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Although pseudomucinous cystadenoma is not an uncommon tumour of the ovary, the histogenesis of this interesting tumour is as yet unsettled. The chance observations of a tumour with certain features, which, in our opinion, are likely to throw some light on this problem, has prompted us to publish this case report.

Case Report

A. N., a Hindu female, aged 18 years, was admitted into Nilratan Sircar Medical College Hospital with the complaints of:— (i) gradually increasing swelling of the lower abdomen for 4 months, and (ii) occasional pain in the abdomen for 4 months.

Obstetrical History: One normal full-term delivery with domicilliary confinement.

Menstrual History: Regular, duration of 4 days with a cycle of 28 days, and normal flow. Menarche started at the age of 12 years. L.M.P. — lactational amenorrhoea since the last child-birth. On enquiry, it was found that she did not notice any swelling prior to the birth of the child. The labour was normal. During the puerperium she detected a lower abdominal swelling but otherwise the puerperium was uneventful. Since the birth of the child the lower abdominal swelling gradually increased in size. Associated with this she had pain over the lower abdomen off and on, which had no relation to bowel or bladder action. Neither was there any history of acute pain necessitating medical intervention.

Examination: Build and nutrition were fair. Examination of the cardiovascular, respiratory and nervous systems did not reveal any abnormality. On abdominal examination, a midline globular cystic mass extending up to the umbilicus was detected. On vaginal examination, the uterus was separate from the mass; uterus was of normal size and consistency, freely mobile and was retroverted. The cervix did not move with the lateral movement of the abdominal mass. Skiagram of the abdomen did not show any x-ray opaque shadow.

She was operated on 2-4-60. Abdomen was opened by a right paramedian incision. An ovarian cyst was detected on the right side. No other abnormality was detected in the other pelvic organs. She had oestrogen for the suppression of lactation and the postoperative recovery was uneventful. The stitches were removed on the 6th day and she was discharged from the hospital on the 7th day after operation. She visited the hospital 6 weeks after her discharge from hospital and on examination, everything was found satisfactory.

Gross appearance of the tumour. A tense cystic tumour about the size of a small cocoanut. On section, the tumour was found to be multilocular, containing straw-coloured slimy fluid. Although most of the cysts were thin-walled, a part of a cyst had rather thickened wall. No hair nor any other ectodermal element recognisable by the naked eye could be found. Section from the thickened area formed the relevant part of the tumour.

Microscopic Examination. Sections from the different parts of the tumour showed cysts lined by the typical tall columnar cells with basal nuclei (Fig. 1). The section from the thickened area of the tumour showed the cyst being lined by similar epithelium which gradually merged into stratified squamous epithelium over the raised area (Fig. 2). The typical prickle cells with intercellular bridges from this part are well seen in Fig. 3. This definitely proves that the epithelium at that area is typical squamous one and not mere pseudostratification or true stratification of columnar epithelium which is sometimes found in these tumours (Reagan, 1949).

Discussion

The typical tall columnar cells with basal nuclei lining these cysts have always been an enigma to the histologists, for such cells are not found in the ovary under normal circumstances. Various theories have been proposed to explain their mode of origin in these tumours. Goodall (1919) believed them to arise from the epithelium of a simple cyst or follicular cysts. Others, like Gardiner (1932), Reagan (1949) and others, supported this view. But the appearances of these cells are so different from those lining the follicles

Fig. 1
Section from the wall of a cyst showing the regularly arranged tall columnar cells with deep staining basal nuclei and clear refractile cytoplasm on the top.
Haematoxylin & Eosin. x 480.

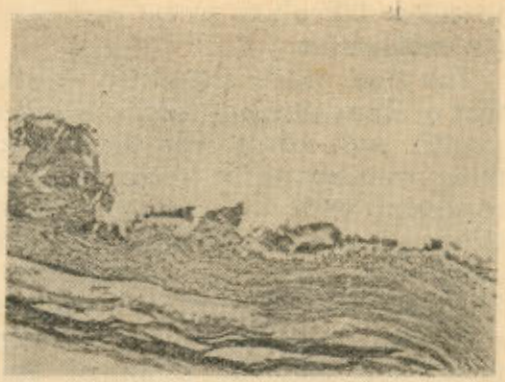

Fig. 2
Section from the thickened part of the cyst showing the gradual transition of the columnar epithelium into stratified squamous epithelium on the left.
Haematoxylin & Eosin. x 60.

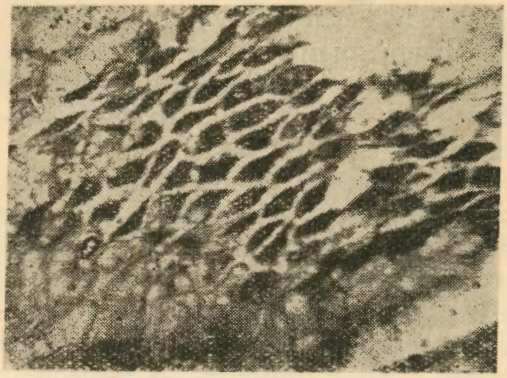

Fig. 3
High power view of the squamous epithelium from the Fig. 2 showing clearly the intercellular bridges. x 480.

that it is difficult to accept such simple explanation.

The most widely supported view is that of Bland-Sutton (1927), Schiller (1940) and others who considered these tumours to be teratomas, i.e. teratomas with the development of intestinal type of epithelium only, the other elements being blighted out. This view was based not only on the similarity in appearance between these cells and the columnar epithelium of the intestines but also on the fact that pseudomyxoma peritonii can occur from the spilling of cells from appendicular mucocele and look exactly like those arising out of ovarian pseudomucinous cystadenomas. This similarity in appearance has been taken as a proof that this epithelium represents the intestinal type of epithelium in an ovarian teratoma.

The demonstration by us of the transition of these epithelial cells into stratified squamous cells proves the multipotential nature of these cells and this fact, we believe, gives a conclusive proof of the teratomatous origin of such tumours, i.e. teratomas where the intestinal type of epithelium predominated, the other elements being blighted out. It is possible that careful search of other pseudomucinous cystadenomas may reveal the presence of such heterogenous histological elements in part of the tumour. This might clinch the issue in favour of this view.

Since pseudomucinous cystadenoma may sometimes be found in association with Brenner's tumour, it has been suggested to be a variant of Brenner's tumour (Novak and Jones, 1939). But the association may be fortuitous. Little credence can be put to other suggestion of histogenesis of these tumours, i.e they arise from rete ovari (Herbut, 1953).

Summary

A case of pseudomucinous cystadenoma is presented which showed a transition of the typical prickle cells into stratified squamous epithelium. The histogenesis of such tumours is discussed on the basis of such observation.

Acknowledgment

We wish to thank Principal R. N. Guha Mazumdar M.B., B.Sc., F.R. C.S., F.R.F.P.S. for kindly permitting us to use hospital records.

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