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Flat metaplasia of the human uterine cervix revealed by the scanning electron microscope

by

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The squamo-columnar junction is of considerable importance in gynaecological oncology.

The pronounced restlessness of the two epithelia at their meeting point marks the spot where the development of a neoplastic transformation is most likely.

In our studies of the female genital tract by a scanning electron microscope (SEM) we have therefore examined the cervix with particular attention.

These transformation zones are among the most frequent and striking lesions in this area.

Until now it was thought that the repair process consisted largely of the replacement of ectopic cylindrical epithelium by flat epithelium.

However, our observations have shown that at least in some cases a metaplasia process (often pluricentric) begins mainly around the outlet of the glandular orifices.

The confluence of several metaplastic zones then brings about the transformation of the cylindrical epithelium into flat epithelium.

This metaplasia, seen under the scanning microscope (¹), is characterised by the enlargement and flattening of the cell surfaces and by the appearance of marked cell borders, plasma bridges and microvilli.

The transformation process is initially more marked around the glandular orifices; at the end of its development it extends over the entire ectopic surface, which is covered by a definitely flat epithelium.

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FIG. 1 - Zone of flat metaplasia to the left, at the squamocolumnar junction; on the right, cylindrical epithelium in the initial stage of change, with virtually complete collapse of the microvilli.
(SEM 1000 \times)

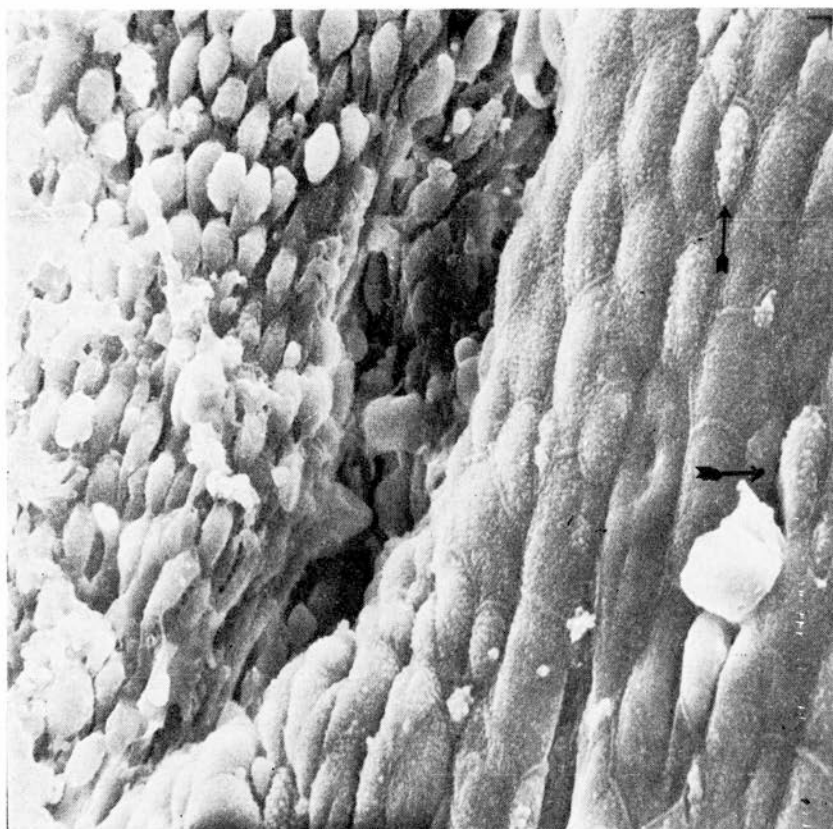


FIG. 2 - Transformation zone; marked demarcation between the cylindrical epithelium on the left and the flat epithelium on the right. The flat epithelium shows a few cells which have not yet completed the transformation process (arrows). (SEM 2800 \times)

GONADOTROPINA CORIONICA

”UMANA”

GONADOTRAFON LH

(LUTEINISING HORMONE)

100·250·500·1000 u.i.

5000 u.i.
MULTIDOSE



TOTALE INAM



ESTRATTO TOTALE
DI
CORTECCIA SURRENAL

SUPRACORT

Ogni ml contiene i principi attivi
estratti da 75 g
di corteccia surrenale fresca

PRESCRIVIBILE INAM



ETINIL ESTRADIOLO PABYRN

mg 0,01~0,05~0,10~1

comprese

GASTRORESISTENTI ED ENTEROSOLUBILI

**IL PRIMO ESTROGENO
PER BOCCA PRIVO
DI EFFETTI
INDESIDERABILI SULLA
MUCOSA GASTRICA**



MINACCIA D'ABORTO?



GESTONE
PROGESTERONE PURO IN
SOLUZIONE OLEOSA

fiale da
50 · 100 mg
AD AZIONE IMMEDIATA



TOTALE INAM



FIG. 5 - Glandular orifice entirely covered by definitely flat epithelium. (SEM 3000 \times)

SUMMARY

By means of the scanning microscope the authors revealed the most important aspects of the process of flat metaplasia at the point of the squamo-columnar junction.

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