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THE BOLLOUS CERVICO-VAGINAL PATHOLOGY

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Summary: The Authors examine bollous cervico-vaginal pathology on the basis of their experience.

Morphological characteristics and histological features of the examined pathology is described.

It was meeting an unusual case of emphysematous vaginitis that induced us to examine a little-known pathology which often presents difficult diagnoses to the gynecologist.

On the basis of our experience and of the most recent world literature we therefore faced a new chapter in cervical vaginal pathology which is little known and has been relatively little studied.

These pimply cervical-vaginal lesions represent an exceptional and infrequent finding in respect of those which are found at the level of the external genitals, which is an area full of possible morbid manifestations of pimply character.

Blisters and pimples – the former smaller than the latter (although one cannot fix a precise limit of extent which allows for differentiation) – are at the level of the skin, in our case of the mucous, usually filled with fluid (serum, lymph,

blood) or exceptionally – as we shall see later – gas.

These elements may have *intramucous* or *submucous* sites. For their genesis, limited to the site under examination we distinguish:

1) *Intercellular edema blister (spongiosis)*. The edema, normally deriving from the serum, separates the cells from one another; the consequence of which is cellular damage with consequent intracellular edema and sometimes reticular degeneration. The result of this formation of micro-vesicles and their coalescence, is blisters.

2) *Intracellular edema blister*. Some viruses invade the epithelial cell causing considerable swelling; these lose their intercellular bridges with consequent acantholysis (ballon like degeneration). The cells thus separate from one another re-

sulting in a single vesicular cavity. An accentuated intracellular edema may cause the rupture of the walls themselves, thus creating microvesicles, in a different way (reticular degeneration).

Finally, regarding submucous blisters:

3) *Gas blister*. Exceptionally the production of gas, induced by probably anaerobic bacteria, can cause the formation of more or less large cavities in the context of the chorion mucous.

4) *Lymphatic thrombosis blister*. At times germs or parasites infiltrated into the chorion may cause thrombosis of the lymphatic vessels with subsequent formation of vesicles and blisters.

Vesicular blister lesions in vaginal or cervical sites are met in:

- a) Blister cervico-vaginitis from contacts or chemical agents.
- b) Herpetes cervico-vaginitis
- c) Emphysematous cervico-vaginitis
- d) Cystic cervico-vaginitis.

a) BLISTERY CERVICO-VAGINITIS DUE TO CONTACT OR CHEMICAL AGENTS

This is the aggravation of the edematous and vesicular reaction caused by contact with harmful agent on the vaginal mucous made sensitive through these substances. The objective examination (blister on erythema) and above all the anamnesis lead to correct diagnosis. In our experience this blister pathology in a cervico-vaginal site is the most common that doctors have to face.

Histologically a notable intercellular (spongiosis) edema is seen. If reticular degeneration is present the vesicles will be separated by fine divisions with a formation of multi-blisters cavities. Few eosinophile, neutrophile lymphocytes and cellular residues are found inside the cavity; all around lymphocytes and migrant neutrophils are noticeable. The upper chorion shows vascular dilation, edema and a

prevalently perivascular infiltration consisting of eosinophile and neutrophile lymphocytes.

Treatment consists essentially in the identification and removal of the causal agent (almost always a pharmaceutical element for local use), and eventual treatment of symptoms.

b) HERPETIC CERVICO-VAGINITIS

Herpetic cervico-vaginitis is produced by one of the Herpes simplex viruses of type II; these are spherical particles of 175 μ diameter which under electron microscope have a discoid appearance due to central changes.

The localisation of the virus (a DNA virus) at the portio and in the vagina (essentially lateral and posterior fornices) is very rare; it is almost always due to and propagated by the upward movement of the much more frequent herpes progenitals which is sited in the vulva.

The mucous is initially hyperemic with vasodilation, and shows superficial edema, specially in the basal stratum of the epithelial surface. In some elements Zschütz intranuclear inclusions appear, with successive cellular swelling and nuclear fragmentation while the cytoplasm becomes pale. The vesicle is therefore formed, first microscopically and then through confluents of nearby vesicles, visible to the naked eye. A small quantity of serous fluid, exfoliated elements of the epithelium and leucocytes are contained in the vesicles.

The vesicles persist for some days, then easily burst revealing an eroded rounded bottom, surrounded by a slight hyperemic halo (fig. A).

On inspection typical herpetic polycystic vesicles are noted; they are rarely isolated and almost always appear in groups, on the reddened and slightly infiltrated mucous. Their volume is variable: from hardly visible to the naked eye, to the size of a grain of millet; the surface is

tight and smooth; the contents are limpid and transparent. If more vesicles flow together we find the rare *blister herpes*. When it bursts, as already mentioned, it reveals small round ulcerations surrounded by hyperemic and infiltrated tissue, with a sierous covered bottom. Sometimes such secretion becomes secondarily purulent because of the association with a secondary infection. If there are no

Regarding treatment vaginal irrigation with slightly antiseptic solutions is indicated; all causes of local irritation must be avoided and other centers of local infection must be eliminated.

Attempts are actually being made by treatment with interferon and other antiviral pharmaceuticals; the administration of antihistamines, vitamin C and local applications of lysozyme are advantageous.

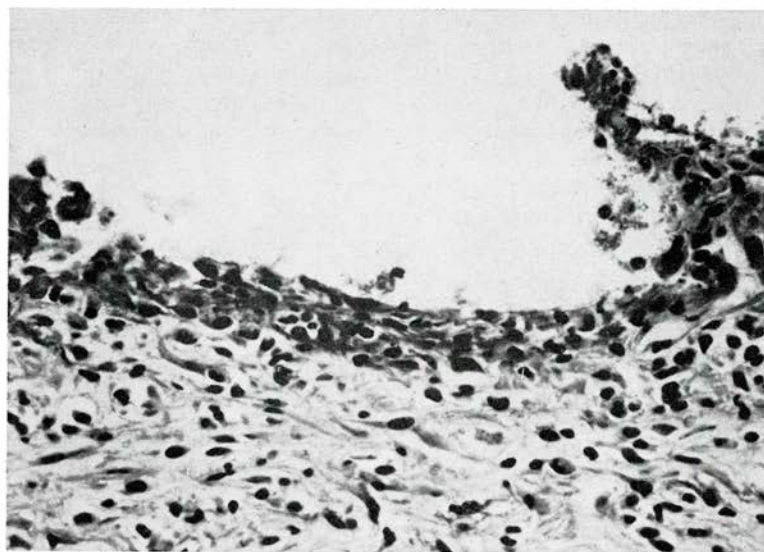


Fig. 1. — Histological picture of emphisematous vaginitis. The wall of the gap. It is covered by histiocytary type elements, while the surrounding chorion includes some inflammatory cells. E.E. $\times 300$.

complications the ulcer heals in 8-10 days without residual scars, leaving a small red spot. Relapses frequently coincide with the menstrual cycle and with physical debility.

Diagnosis, easy because of the typical characteristics of the vesicles, the form of onset, the brief development of the disease and the absence of outcome, must always be suspected in a patient who only complains of sierous leucorrhea, sometimes streaked with blood.

c) EMPHISEMATOUS CERVICO-VAGINITIS

Emphisematous cervico-vaginitis is a rare lesion of which about 200 cases have been described in literature. It was reported for the first time by Hugnier in 1847 and is also known under the name of emphisema of the vagina and, because of its rarity, became confused with the more frequently encountered cystic vaginitis, from which it differs essentially because of its blister content: gassy in the first, sierous in the second.

It is observed above all in women with cardiovascular or pulmonary disease, or in pregnancy or in association with trichomoniasis. On vaginal inspection it is characterised by the presence of multiple protrusions of blistery appearance on the exocervical and of the upper third of the vagina. These blistery formations are blue gray in colour even silvery coloured, since the epithelium that covers them is as thin as the blisters are large. Generally small, they may vary from a pinhead to a cherry or more, may be isolated or collected in groups. The salient fact is that these modifications stop at the vaginal entrance and do not extend to the vulva.

The rupture of these cysts gives rise to the outflow of gas and causes ulceration.

Although generally asymptomatic and spontaneously healing, emphisematous cervico-vaginitis may produce embarrassing bursts at the rupture of the cysts and above all may alarm the clinician because of its showy, macroscopic and unusual appearance. Its etiopathogenesis is unknown. The cysts are full of carbon dioxide which according to some are the product of probably anaerobic bacteria not yet isolated (according to some AA. the *Emphysematosus phlegmonosus bacillus*) which after having infiltrated into the epithelium tunic reach a lymphatic gap in which to develop and produce gas.

There have sometimes been identified even fungal spores in the interior of the cavity. Therefore the complete disappearance of the lesion after fungicide therapy has suggested to others a certain relation with the infection by trichomonas. Such a suggestion reinforced by the possibility, shown in experimental animals, of producing gas subcutaneously injecting suitable quantities of protozoa.

On histological examination (fig. C-1) the blisters, whose fundamental characteristic is that they are optically empty, appear surrounded by connective tissue and by numerous gigantic polynucleate cells. Around the skin infiltrated inflammatory

cells are found, polymorphonucleate, neutrophil and eosinophil cells, monocytes, hyperemic blood vessels and dilated lymphatic vessels. In some zones the epithelium stratum appear moderately thickened and paracheratotic.

No specific pharmaceuticals exist and generally symptomatic therapy must be undertaken, suitable for attacking leukorrhea; prognosis is favourable inasmuch as cure is always spontaneous after the delivery.

The only case which came to our notice was a pregnant woman affected by trichomonas cervico-vaginitis, which cleared up immediately and completely after delivery, without any treatment.

d) CYSTIC CERVICO-VAGINITIS (fig. B)

As emphisematosis favours the pregnant condition, it is different from this on account of the contents of the blisters and vesicles, which in this case is serous. Its etiopathogenesis is unknown. Some Authors consider that it is due to not clearly identified parasites or germs which cause a lymphatic thrombosis at corion level; other AA. instead uphold a mechanical etiology from a blow.

Contrary to our experience, that this lesion is an occasional finding, many consider it very frequent in pregnancy, and almost exclusive to it; it disappears after delivery without any treatment. It is mostly localised in the upper third of the vagina, specially posterior, and on the exocervix, and is constituted of small blisters, isolated or reunited in groups, of variable sizes from a rice-grain to a pea.

It is quite frequently accompanied by a thick and abundant leukorrhea. The blisters, as already indicated, are localised in the chorion and have a serous content (probably trimethylamine); they are covered by a distended mucous, thinned by the strong tension of the fluid they contain and may rupture during examination, thus releasing the contents.

Fig. A. — Colposcopic picture of herpetic colpit.

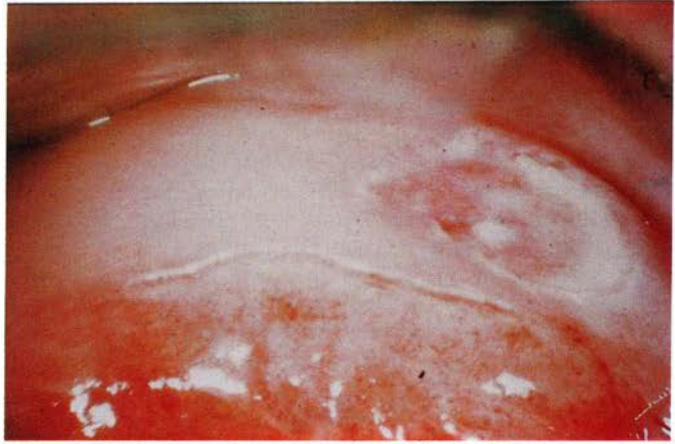


Fig. B. — Colposcopic picture of cystic vaginitis.



Fig. C. — Histological picture of emphsematous vaginitis. The large gaps optically empty are noticed. Eso-cervical mucous. E.E. $\times 25$.



Histologically they present very variable pictures: in some cases flogistic changes predominate, thrombotic in others.

Treatment, considering that the lesion disappears after the delivery, is purely symptomatic.

It may be noticed that both lesions (emphisematous and cystic cervico-vaginitis) could be two different aspects of the same pathology. In some cases the thrombotic reaction of the lymphatics would prevail (with consequent formation of serous blisters) and in others, more rarely, the production of gas (with formation of gaseous blisters).

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