

"The rat tail" as a pathognomonic morphological pattern of infection by actinomyces in patients who use or not intrauterine devices

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Abstract:

The morphological diagnosis of actinomyces in cytological samples from the female genital tract is well represented in the literature. Their finding presents an important relationship with the use of intrauterine devices, although this relationship cannot always be demonstrated. The "rat tail" image can be considered "classic" as well as rare. Our intention is to show a small atlas or collection of images extracted from our archive in order to recover and disseminate this peculiar and useful diagnostic finding.

Keywords: actinomyces; tail of rat; intrauterine device

Introduction

The Bethesda system has provided a universal language for diagnoses made in the field of cervicovaginal cytopathology while it has led to a simplification of the tetravalent formula (hormonal pattern, microbiological pattern, morphological/organic pattern, and notes/suitability assessment of the sample) of the diagnoses of yesteryear. In many cases, the care burden has made it necessary to simplify the Bethesda formula to the simple verification of the positivity or negativity of cervical cancer and/or its precursor lesions. Information has been lost, perhaps too much, perhaps not transcendent, but important for the interests of the patient. Ignoring the presence of microbial elements prevents the correct management of patients. The presence of actinomyces, associated or not with infection, is a clear example of this topic in question. We resort to the nostalgic image of the "rat tail" formation to vindicate its usefulness through images.

Material and methods

We have carried out a review of the diagnoses of cervicovaginal smears in our center in which the presence of actinomyces has been reported in the last year. Verifying that the most common presentation from the morphological point of view is that which obeys a spherular pattern reminiscent of basophilic "fluffs" from which peripheral extensions that are difficult to characterize at low magnification emerge, we have reviewed these extensions in search of the classic formation "in rat tail", much less frequent.

Results

We have photographed all those formations that meet the requirements to be considered "rat tail" and we have verified, as expected, that its association with the presence of intrauterine devices (IUD, ESSURE...) is frequent, although not universal, its association with colonization and infection by cocobacilli is frequent and its identification is effective and simple in relation to the classic morphological patterns. We intend to make a graphic presentation that helps to value again a classic morphological pattern that we believe should be included in cytological diagnostic reports even without characterizing it due to the consequences that its presence implies.

Conclusion

Regardless of the morphological pattern of the presence of actinomyces in the female genital tract, its inclusion together with the diagnoses of positivity, negativity, and adequacy is of great importance since its absence, accompanied or not by symptoms, implies a described risk of ascending dissemination. and a risk factor for PID and sterility. In our opinion, the "rat tail" pattern helps in this purpose, and we hope to capture with our presentation the attention of the retinas of both cytotechnicians, pathologists in training and even cytologists "adapted to the demands of the demand" because, in the Bottom line, Cytology is an art, and art reaches us through any of our senses.

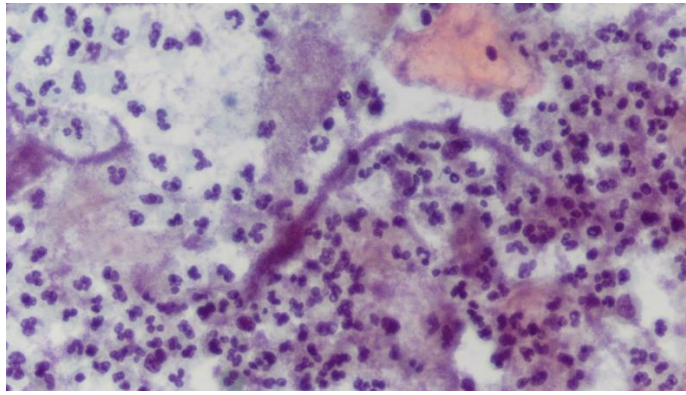


Figure:1

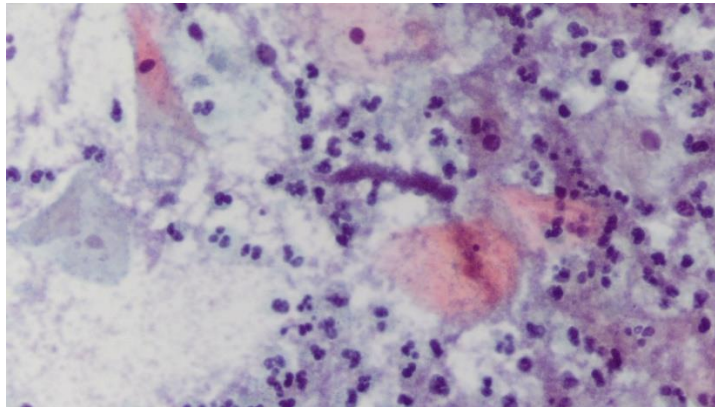


Figure:2

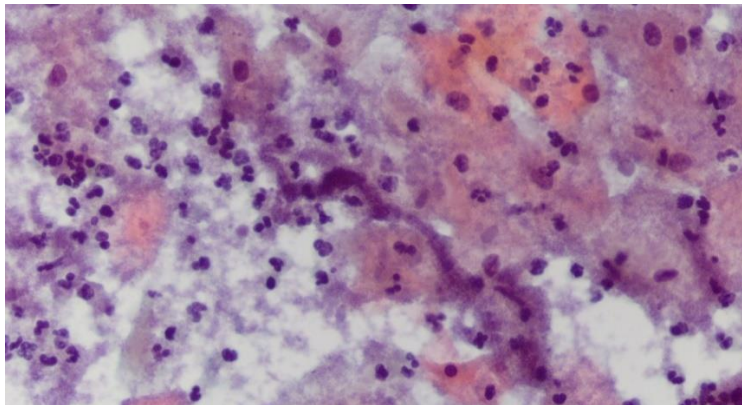


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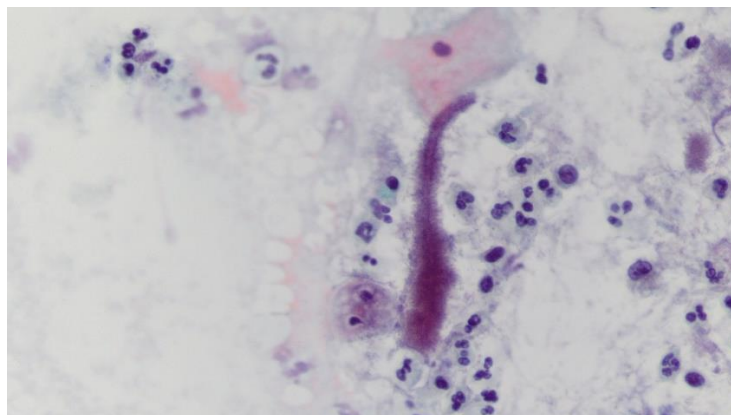


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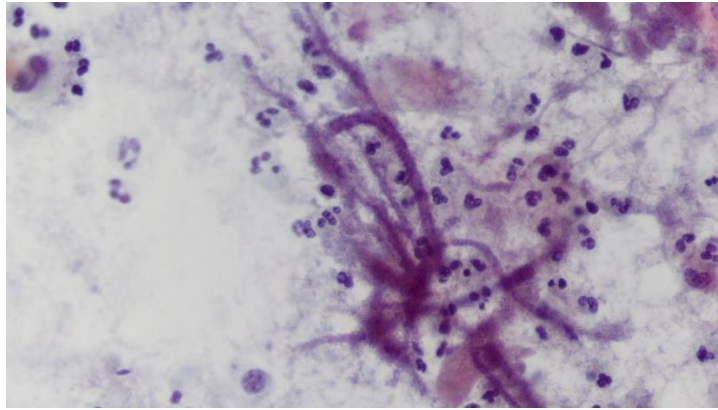


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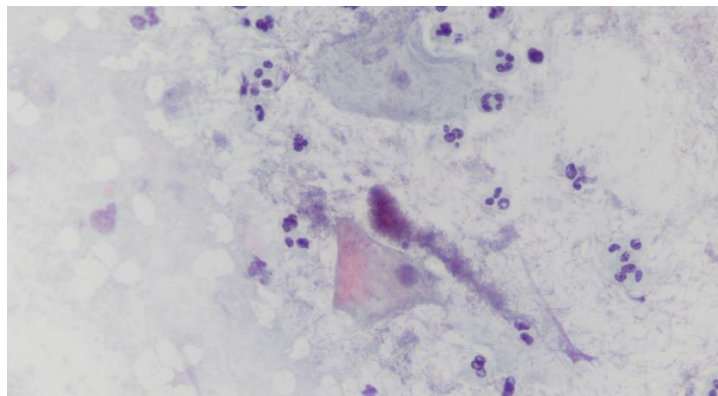


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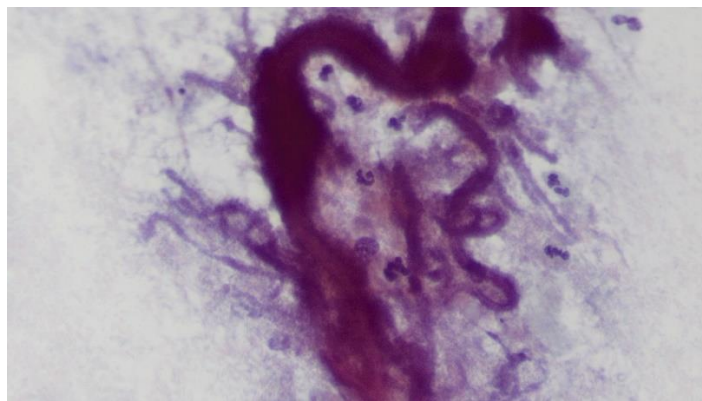


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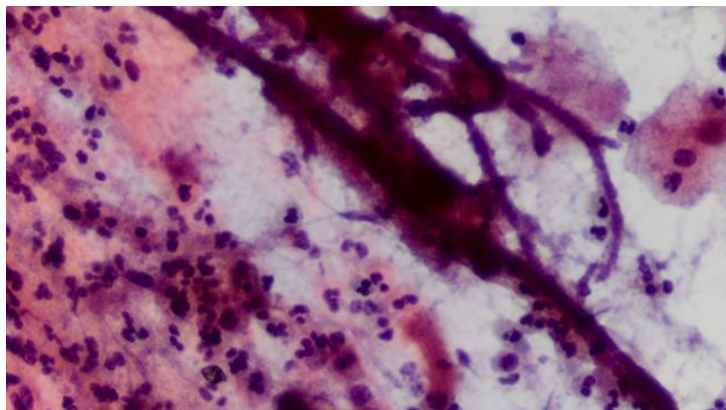


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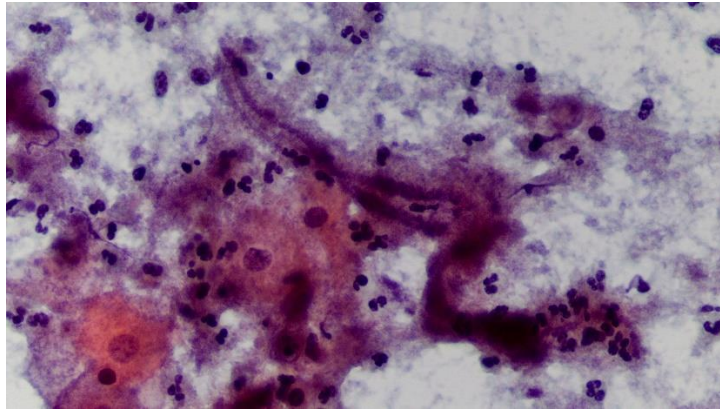


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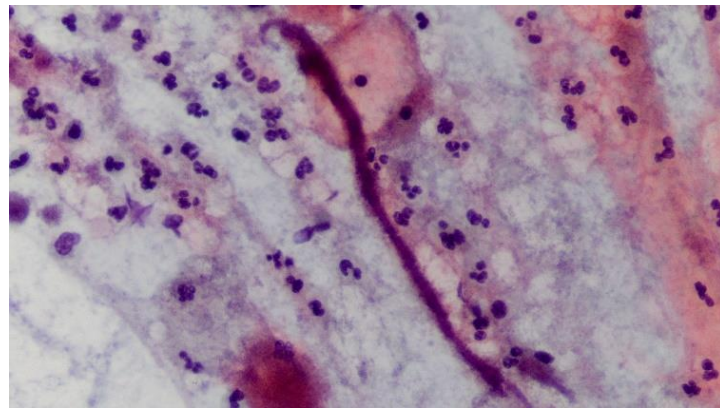


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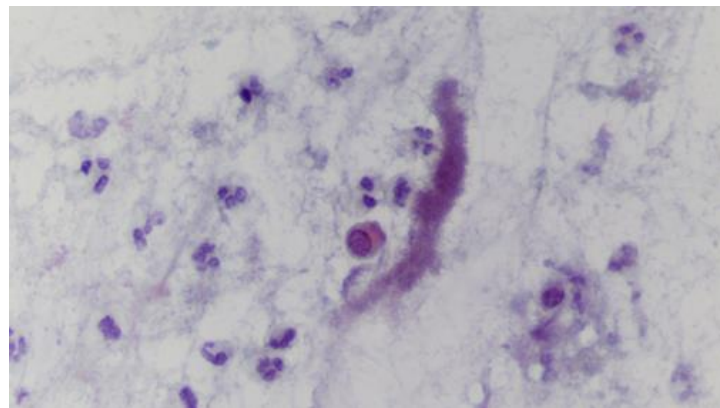


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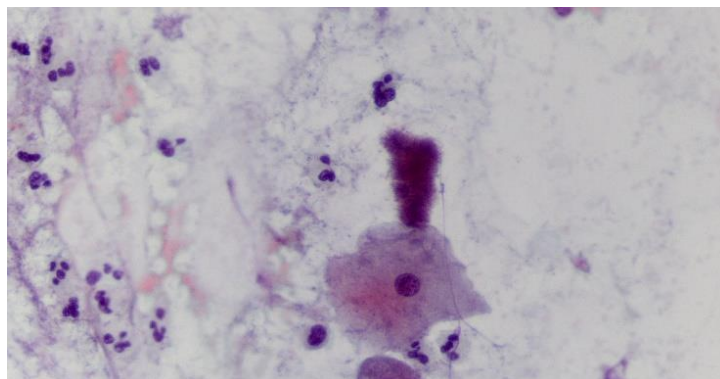


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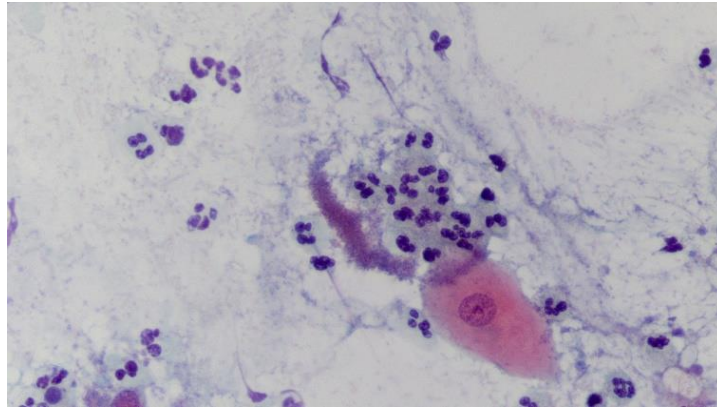


Figure:13



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