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Correspondence

Acanthosis Nigricans and Ovarian Carcinoma

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Dear Editor,

Acanthosis nigricans (AN) is a common condition related to metabolic syndrome and insulin resistance, first described in 1890 by Pollitzer and Janovsky independently, and has been classified as syndromic, malignant AN (MAN), acral, unilateral, drug-induced and besides mixed.[1-5] The lesions of AN are originated by stimuli of high levels of the insulin-like growth factor and transforming growth factor on the fibroblast and epidermal growth factor (EGF) receptors.[2] Benign AN is an uncommon hereditary disease that decreases around puberty; and the drug-induced AN may be associated with medications that may cause hyperinsulinemia, such as the example of the corticosteroids, oral contraceptives, oestrogen, insulin and nicotinic acid.[2] The mechanisms of MAN development include the actions of the tumour growth factor-alpha, besides the EGFs secreted by the tumour and the upregulation of the EGF receptors.[1-4] MAN is a paraneoplastic manifestation of the oesophagus, stomach, intestines, liver, pancreas, thyroid, prostate, kidney, bladder, uterus, breast, throat and ovarian cancer.[1-5] The tripe palms are a variant of AN that is more often associated with MAN.[1]

Recently, we read in this Journal the illustrative case study of a 68-year-old woman who had the diagnosis of MAN, and the lesions evolved 4 months with no systemic impairment.[1] Interestingly, the patient also presented with tripe palms and her MAN was associated with a carcinoma of the ovary, a condition that is considered uncommon (3.5%) in the literature.[1] The planned management for Stage III ovarian carcinoma was surgery and chemotherapy with paclitaxel and carboplatin, and her cutaneous manifestations persisted in the follow-up.[1] The authors stressed that AN precedes (48%), coincides (21%) or follows (31%) the tumour diagnosis, and abrupt onset and rapid evolution of manifestations involving the face, genitalia, mucous membranes, areolas and flexor regions are useful tools for diagnosing a MAN case.[1] As the early diagnosis of MAN can contribute to better outcomes, additional comments on novel literature data are presented, aiming to enhance the awareness and suspicion index.[3-5]

An exceedingly rare differential diagnosis of MAN was reported in a 4-year-old non-obese girl with AN on the back of neck and skinfold creases, and signs of hyperandrogenism, high levels of insulin, inhibin A and B and total testosterone, related to a granulosa cell tumour.[3] The blood determinations of control normalised, and the AN regressed after left oophorectomy. Her mother had diagnoses of hemochromatosis and polycystic ovarian syndrome, while the maternal great-aunt and paternal great-grandmother had ovarian cancers at advanced ages.[3] The authors highlighted the differential diagnoses of virilisation and insulin resistance and commented on possible relationships between testosterone secretion and hyperinsulinemia.[3] A 49-year-old woman had AN and florid cutaneous papillomatosis (FCP) associated with a low-grade bilateral ovarian serous carcinoma involving

the bowel, iliopsoas muscle and ureters, initially treated by carboplatin and paclitaxel, followed by radical surgical excision.[4] Both FCP and MAN lesions gradually regressed or disappeared after the surgical procedure. The authors commented on the FCP – a paraneoplastic manifestation of gastric, lung, breast, bladder, uterus, ovary and prostate cancers characterised by cutaneous lesions grossly mimicking viral warts – that may also be associated with the MAN and the Leser-Trélat sign.[4] They also highlighted that this case study is the first description of an asymptomatic ovarian serous carcinoma manifested by associated MAN and FCP at the occasion of the diagnosis.[4] A 67-year-old woman presented abrupt oral macular papillomatosis on the hard palate, oral mucosa, gingiva and upper lip, besides the pigmentation around the neck, back of hands and armpits confirmed as paraneoplastic manifestations of a high-grade serous ovarian cancer.[5] With the confirmed diagnosis of MAN, she underwent surgery and chemotherapy, completely improving the oral and cutaneous lesions, with no recurrences in 3 years of follow-up.[5] The authors emphasised the atypical case of MAN with accentuated oral changes and mild skin lesions, which enhance the role of dental specialists in prompt diagnosis and management.[5]

In conclusion, the abrupt development of AN may be a useful indication of possible occult malignant tumours, whether in routine clinical evaluations or complete necropsy studies. Primary health care workers should always refer those patients with suspected AN to undergo specialised dermatological evaluation, avoiding delay in establishing appropriate management.

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