Adult E-Poster

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OSTEOPOROSIS IN ACROMEGALY: A PARADOXICAL COMPLICATION WITH MULTIFACTORIAL MECHANISMS

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INTRODUCTION/BACKGROUND

Acromegaly results from prolonged exposure to elevated levels of growth hormone (GH) and insulin-like growth factor-1 (IGF-1), which contribute to increased bone turnover. Despite IGF-1's known anabolic effects on bone, patients with acromegaly paradoxically face a higher risk of developing osteoporosis and vertebral fractures. This case series highlights the significance of early evaluation of bone health in managing acromegaly.

CASE

We evaluated four patients with confirmed acromegaly—three females and one male—ranging in age from 27 to 56 years, who underwent bone mineral density (BMD) testing via dual-energy X-ray absorptiometry (DXA). Half of the patients were diagnosed with osteoporosis, one had osteopenia, and one had normal BMD with borderline values.

A 27-year-old male, diagnosed with acromegaly at the age of 13, exhibited severe osteoporosis with lumbar Z-score –4.3, hip Z-score –3.6, and radius Z-score –3.3, and also exhibited panhypopituitarism and skeletal deformities. A 56-year-old postmenopausal female, diagnosed at 41 years, had osteoporosis with spinal T-score –2.7 and radius T-score –2.9. A 34-year-old female, diagnosed at age 29 and with secondary amenorrhea, had osteopenia (radius Z-score –2.2) despite near-normal lumbar and hip values. A 34-year-old male, diagnosed at 33 with hypogonadotropic hypogonadism, had overall normal BMD, though his radius showed a borderline Z-score of –0.5. Longer disease duration and hormonal deficiencies appeared to correlate with lower BMD, especially in trabecular-rich regions.

While GH and IGF-1 stimulate bone formation, chronic excess may disrupt bone remodeling balance, leading to increased resorption, deterioration of trabecular structure, and higher cortical porosity. Local IGF-1 resistance and hypogonadism further impair bone integrity. These changes contribute to bone fragility even when BMD appears normal, suggesting that skeletal damage may precede densitometric findings.

CONCLUSION

Osteoporosis is a frequent but underrecognized complication in acromegaly. Bone fragility may develop early due to increased bone turnover, trabecular deterioration, and hypogonadism—despite normal or elevated BMD.

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UNVEILING THE UNEXPECTED: A RARE PARAOVARIAN PARAGANGLIOMA MASQUERADING AS AN ADNEXAL MASS

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INTRODUCTION/BACKGROUND

Paragangliomas are rare neuroendocrine tumors that arise from extra-adrenal paraganglionic tissue, typically associated with the autonomic nervous system. While they are most commonly found in the adrenal medulla (as pheochromocytomas) or along the sympathetic and parasympathetic chains, their occurrence in the paraovarian region is extremely rare.

CASE

We present the case of a 42-year-old female with a history of left external iliac and common femoral vein thrombosis, who presented with progressive abdominal distension over the past six months. She was normotensive and exhibited no constitutional symptoms, features of catecholamine excess, or compressive symptoms. Blood investigations revealed an elevated CA125 level while other tumor markers were within the normal range. A Computed Tomography (CT) scan of the thorax, abdomen, and pelvis revealed a large intra-abdominal cystic mass measuring 15.2 × 20.8 × 24.5 cm, likely originating from the left ovary with significant mass effect.

The patient underwent an extrafascial hysterectomy with bilateral salpingo-oophorectomy (EHBSO), left pelvic lymph node dissection (PLND), omentectomy, appendicectomy, and adhesiolysis. Histopathological examination of the left