INCREASED PREVALENCE OF OBESITY AND OBESITY-RELATED POSTOPERATIVE COMPLICATIONS IN MALE PATIENTS WITH MENINGIOMAS.

CLINICAL STUDIES

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Abstract:
OBJECTIVE: The female preponderance of meningiomas may reflect hormonal influences on meningioma growth. We hypothesized that because obesity affects male steroid hormone synthesis, male patients with meningiomas might exhibit a high obesity rate, which, in turn, might increase their frequency of postoperative complications.

METHODS: We retrospectively reviewed male patients who underwent craniotomy for benign meningiomas at our institution between 2001 and 2005 (n = 32) and used male patients undergoing craniotomy for aneurysms (n = 32) or glioblastomas (n = 32) from 2001 to 2005 as control subjects. Body mass index (BMI) greater than 30 kg/m² was considered obese.

RESULTS: Male patients with meningiomas had a higher average BMI (30.2 kg/m²) than male patients with aneurysms (BMI = 27.5 kg/m²) or gliomas (BMI = 25.9 kg/m²) (P = 0.04). The obesity rate in men with meningiomas (47%) exceeded that in men with aneurysms (19%) or gliomas (3%) (P = 0.2). The median age-normalized BMI percentile was greater in men with meningiomas (67th percentile) than in men with aneurysms (49th percentile) or gliomas (52nd percentile) (P = 0.02). Deep vein thrombosis/pulmonary embolus was more common in men with meningiomas (6%) than in men with aneurysms (3%) or gliomas (0%) (P = 0.2). Wound infections were more common in men with meningiomas (6%) than in men with aneurysms (3%) or gliomas (0%) (P = 0.02). The 53% of obese patients with meningiomas who were readmitted with postoperative complications exceeded the 18% of nonobese patients with meningiomas who were readmitted (P = 0.03); complications included deep vein thrombosis and pulmonary embolus (27 and 12%, respectively, in obese and nonobese patients with meningiomas) and postoperative fever (53 and 35%, respectively, in obese and nonobese patients with meningiomas).

CONCLUSION: We found that many men with meningiomas are obese, suggesting a hormonal influence on meningiomas in men as well as women. Our results also underscore the high risk of postoperative complications in obese male patients with meningiomas.

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