

Commentary on: Injection of Steroids Intralesional in Central Giant Cell Granuloma Cases (Giant Cell Tumor): Is it Free of Systemic Complications or Not?

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Editorial

Dear Editor-in-Chief,

In the above mentioned article, published on Elsevier's International Journal of Surgery Case Reports, the diagnosis of central giant cell granuloma (CGCG), and the recruited line of treatment, cannot be supported by enough evidence. El Hadidi, Ghanem and Helmy [1] have mistakenly reported Cushing's syndrome, in a normal patient, as a systemic manifestation of injecting intralesional steroids.

Experimenting the patient for testing the effect of injecting too much triamcinolone into the would-be CGCG and deceiving readers by faking a serious complication, under the auspices of Elsevier's *International Journal of Surgery Case Reports*, are morally abominable. Having advocated so, kindly check the following clues:

1. The would-be osteoclast-like giant cells shown by the authors' non-representative figure 6 in ref. [1], which was senselessly claimed to be of fibroblastic origin, cannot establish their diagnosis of CGCG. The authors chose to provide a very magnified field, 40x, to direct the reader toward their subjective opinion.

Moreover, CGCG, aneurysmal bone cyst (ABC), and ossifying fibroma demonstrate aggregations of similar giant cells. Although the low magnification can distinguish between them all, the higher magnification, which focuses only on giant cells, as provided in the criticized article, fails this [2].

2. Similarly, the authors' figure 9 in ref. [1], which ought to display a newly formed woven bone, does not reveal any and is another practice of deliberate deception. Put simply, the CGCG does reveal area of osteoclast-like giant cells and reactive bone (irregular osteoid) [3].

Distinguishing the newly formed bone is assessed, as "experienced" pathologists know, using histochemical stains but not using H&E [Goldner's Masson trichrome staining, in bone histology, allows tissue identification by different coloring as well as by morphological identification [4,5].

To discuss this point further, photomicrographs of a giant cell granuloma (Figure 1) and of an ossifying fibroma (Figure 2) are provided. Both demonstrate, at the low magnification power, "osteoclast-like" giant cells.

Although the available histological information in both figures can distinguish between the two diagnoses, the higher magnification, which focuses only on giant cells, fails this (Figure 3).

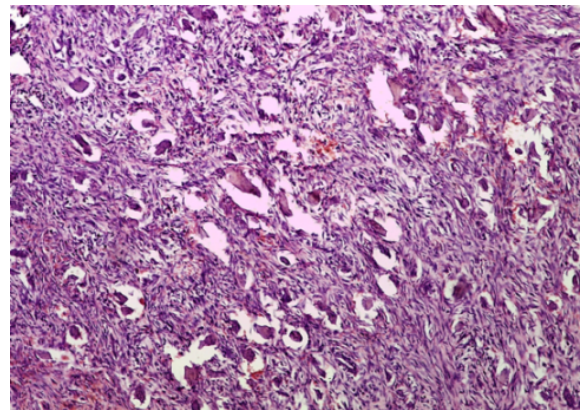


Figure 1: Photomicrograph exemplifying a fibroblastic matrix and abundant multinucleated giant cells in a giant cell lesion (Original magnification: 10x).

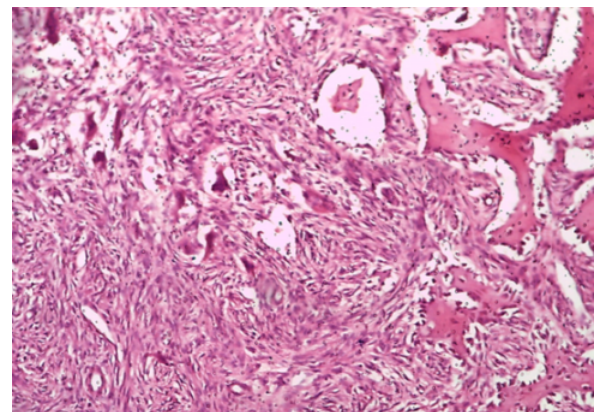


Figure 2: Photomicrograph illustrating fibrous connective tissue with well-differentiated spindled fibroblasts and trabecular bone formation. Sporadic occurrence of multinucleated giant cells is also conspicuous (Original magnification: 10x).

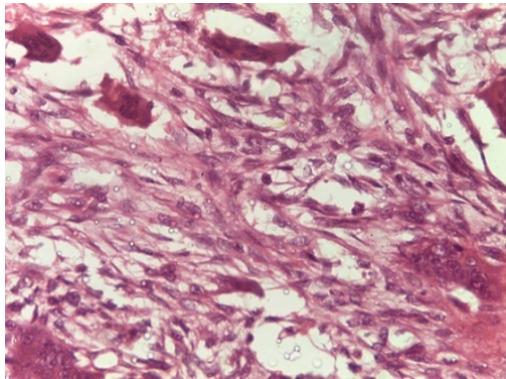


Figure 3: Photomicrograph showing multinucleated giant cells, with artefactual spaces, set against a loose background. As such, the appearance of multinucleated giant cells cannot be diagnostic (Original magnification: 40x).

3. Surgical removal, by careful enucleation, is the mainstay treatment of CGCG and of ABC [3]. According to the WHO, the (intralesional) glucocorticoids injection has proven effective in “some” cases. The authors did not comply with Carlos’ suggested dosage [6]. They, instead, injected TWICE WEEKLY what is equivalent to 30 mg of intralesional triamcinolone acetonide (ITA) into the lesion per visit. This resulted in accumulation of 400 mg of ITA. However, Carlos et al. [6] have injected the CGCGs twice monthly and have lowered the dose in pediatric patients. Thus, the authors have, at least, quadrupled the risk of developing side effects and may have iatrogenically maimed the adrenal gland of the patient. With respect to the optimal dose of ITA, It should not exceed 30 mg per month in children [7].

4. Diagnosing the case of CGCG, based on the radiological findings, is another glaring error. In this connection, I provide two radiological pictures of one of my archival cases (Figures 4 and 5) whose diagnosis was recently established as hemangioma. Underpinning the literature, it is obvious that similar cases were reported but their diagnosis was juvenile ossifying fibroma with ABC [8-10]. Moreover, the monthly panorex shows neither regression nor decrease in the lesional size. There appears no slightest increase in the radio-opacity as to the “supposed” healing process.

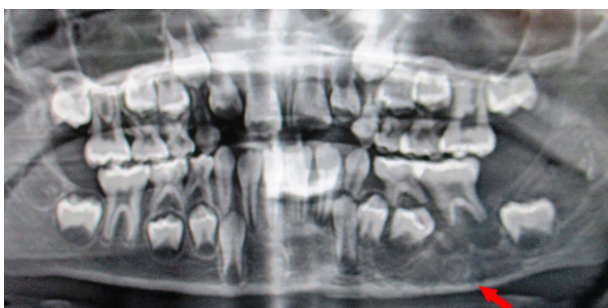


Figure 4: Panoramic view displaying a multilocular radiolucency at the left mandible of a 7-year-old female. The lesion recapitulates, mostly, a soap bubble appearance and causes a massive resorption of the mandibular bone.



Figure 5: CT view, without contrast, showing the buccolingual bony destruction of the same case (hemangioma).

5. If the lesion did not decrease in size and was successfully excised after 3 months without disfigurement, why would the authors have to apply ITA from scratch?

6. Beguiling more readers, the authors chose to subjectively report Cushing’s disease as a consequence of injecting intralesional steroids. In doing so, they, again, promoted their tentative diagnosis to be final and turned a deaf ear to the Guidelines of the Endocrine Society’s Clinical Practice [11]. Such guidelines require basically ruling out any exogenous administration/ingestion of glucocorticoids.

They also mandate running three screening tests to establish the diagnosis of Cushing’s syndrome. The patient, according to the manuscript, was never referred to any endocrinologist. The ACTH of the patient was, moreover, normal.

7. Osteopontin, not osteopontine, is a protein with diverse functions. None of these functions pertains to measuring the quantity of newly formed bone [12]. Also, the authors provided no photomicrographs at this end.

Therefore, the diagnosis of CGCG is not based on unequivocal evidence and so is the non-approved treatment. More important, injecting 400 mg of ITA monthly, for 3 months, is by all the odds experimental. Also, there appears no compliance with the Declaration of Helsinki. Although the parent’s consent to surgically excising the lesion is mentioned, there is no reference to any written “informed” consent before starting the treatment plan. The local ethics committee would’ve impeded this intervention.

To conclude, the authors reported, erroneously, Cushing’s syndrome as a systemic complication of intralesional injection. Publishing misleading photomicrographs, ignoring the medical ethics and blaming the alternative technique, instead of confronting their iatrogenic error, endorse a clue as to the authors’ non-professionalism and does question the process of the peer-review from the part of the publishing journal.

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