

Non-operative treatment of chronic subdural hematoma: Case Report

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Abstract : The literature on the non-operative treatment of chronic subdural hematoma is scanty indeed as it appears that many neurosurgeons take surgical evacuation for granted as its key management principle. We here present the case of a 61-year-old man with a severe, troublesome headache of 4 days duration following a minor trauma. He had been involved in another minor trauma 2 months before the index admission. Cranial computed tomography (CT) scanning showed a left frontoparietal chronic subdural hematoma with notable mass effects. He declined surgery for personal reasons and was thus treated non-operatively on a short course of low dose dexamethasone. Clinical improvement was dramatic within 5 days into treatment and repeat CT 5 weeks later showed nearly complete resolution of the subdural hematoma. We therefore conclude that in well selected cases, non-operative treatment is a viable option in the treatment of chronic subdural hematoma.

Keywords: Chronic subdural hematoma, non-operative treatment.

INTRODUCTION

Empirical evidence suggests that most neurosurgeons take surgical evacuation for granted as the key principle in the management of symptomatic chronic subdural hematoma (CSDH)¹. Hence there is a whole range of surgical procedures employed in the treatment of this disease condition. For the same reason, the literature on non-operative treatment of CSDH is scanty indeed². We recently successfully managed a case of chronic subdural hematoma non-operatively and here present the report.

CASE REPORT

A 61-year-old man had persistent headache for 4 days following a minor pedestrian motorcycle accident. There was brief immediate loss of consciousness lasting only a few minutes. He was in the care of his family physician until referral to us because of the persistent headache. Clinical evaluation by us revealed the fact that he had been involved in another minor trauma 2 months prior to this index presentation. He had no history of chronic alcoholism or coagulopathy.

General clinical and neurological examination was normal. Blood tests including clotting profile were normal.

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Cranial computed tomography (CT) scan revealed a left frontoparietal mixed density (hypo and isodense) subdural collection 20 mm thick. There was significant mass effect with effacement of the body and the occipital horn of the left lateral ventricle and about 10 mm midline shift, figure 1 A. A diagnosis of left frontoparietal chronic subdural hematoma, Markwalder grade 1 was made. He was offered surgical evacuation of the hematoma but the patient said he could not yet mobilize enough time and resources to submit himself for in-hospital stay and surgical operation. We therefore gave him an outpatient course of analgesics and oral dexamethasone 2mg every 12 hours for 5 days. He also had strong warnings to report back to us immediately there was any deterioration in his clinical state.

Clinical improvement was dramatic on this line of management. He was completely free of symptoms by 5 days of treatment and was able to resume his normal activities of daily living by the second week. Repeat cranial CT 5 weeks later, figure 1 B, showed nearly complete resolution of the subdural hematoma.

DISCUSSION

Non-operative treatment of a well documented case of chronic subdural hematoma is here presented. There was good and prompt clinical, and radiological response to a short course of low dose steroid (dexamethasone) and analgesia.

It may appear from contemporary literature that surgical evacuation is the main and only treatment modality in the management of CSDH^{1,3}. This is why

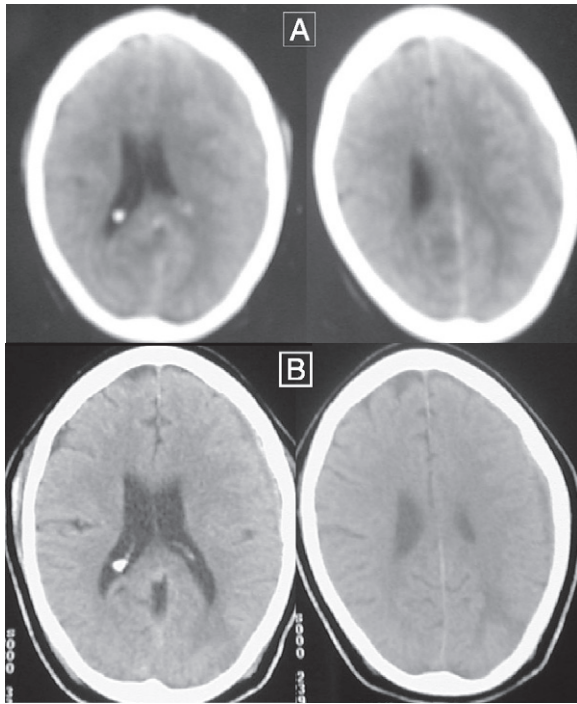


Fig 1: Non-operative treatment of CSDH. (A) Cranial CT scan at presentation showing the left frontoparietal chronic subdural with effacement of the body and the occipital horn of the ipsilateral lateral ventricle. There is also midline shift to the right. (B) Follow-up study 5 weeks later showing nearly complete resolution of the hematoma.

there is such a whole gamut of surgical procedures deployed in that respect, including twist-drill craniostomy, burr hole craniostomy, subtemporal craniectomy, endoscopic procedures, and, craniotomy and membranectomy when necessary^{1,3,4,5,6}. Although these are very effective indeed, they are not without complications some of which can be major, including, for example, remote intracerebral hemorrhage^{2,7}.

In consequence, much of the literature dealing with non-operative treatment of CSDH is old and many of these earlier reports appear to focus more on cases with documented spontaneous resolution⁸. Nonetheless, there exists evidence, including some recent case series², of successes with non-surgical primary treatment of CSDH in well selected cases. Such cases include patients adjudged to be good grade based on their minor complaints (usually only headache) and presence of only mild neurological deficits (such as reflex asymmetry) on neurological examination^{2,5}. Our patient represents one such case, hence our acquiescence to his request for non-surgical treatment.

The mechanism by which steroids aid in the resorption of CSDH is still not clear and our case might well have represented another example of spontaneous resolution of the hematoma. However the rapidity of symptom resolution on treatment in our patient (within 5 days) and the proven membrane stabilizing action of dexamethasone^{2,9} make us posit that this case represents another example of successful primary non-operative treatment of CSDH with the use of dexamethasone.

In well selected, good-grade cases, non-operative treatment with dexamethasone is an option in the management of chronic subdural hematoma.

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