Spontaneous Retropharyngeal Bleeding in a Patient on Chronic Hemodialysis

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Dear Sir,

In patients undergoing hemodialysis, spontaneous bleeding has been reported in such locations as the mediastinum [1] subdu-ra space [2], retroperitoneum [3], pericardial and pleural cavities [4] and the subcapsular space of the liver [5], but to our knowledge it has not been described in the retropharyngeal space. Here, we present a case of a woman with chronic renal failure who developed a retropharyngeal hematoma during dialysis treatment. A 74-year-old woman, a patient with chronic renal failure was maintained on continuous ambulatory peritoneal dialysis for almost 38 months when she was switched over to hemodialysis for reasons of recurrent peritonitis. Her medications included: Inderal, calcium carbonate, aluminum hydroxide gel and vitamin supplements. Her hematologi-cal tests were: hemoglobin 83 g/l and platelet count $217 \times 10^9/l$. Her predialysis blood urea was 31.9 mmol/l (BUN 88.3 mg/dl), and she had a creatinine of 1,202 $\mu\text{mol/l}$ (13.6 mg/dl). Her parathyroid hormone (intact) value was 33.7 pmol/l intact. (Normal range 2-6 pmol/l.) During the 46th hemodialysis session, the patient became diaphoretic and developed weakness and fatigue. She appeared pale and anemic and developed a large area of ecchy-mosis around the root of her neck. The ecchy-mosis was very substantial in the posterior aspect, but also was evident anteriorly. Findings of generalized osteoarthritis were again noted. A laboratory evaluation included: hemoglobin 60 g/l, hematocrit 180 vol/l, platelets $340 \times 10^9/l$, prothrombin time 11.4 s, partial thromboplastin time 33.7 s and bleeding time 8.6 min. Biochemical studies were essentially the same as before. An X-ray of the cervical spine and soft tissues of the neck revealed distention of the soft tissue behind the pharynx and trachea (fig. 1a, b).

Fig. 1. A soft tissue density noted behind the thyroid cartilage and anterior to the cervical spine. a At the time of presentation. b Four weeks later.

The patient received three units of packed cells, and she was given intermittent peritoneal dialysis for 48 h before going back on hemodialysis. Four weeks later, a repeat X-ray of the neck showed gradual resorption of the hematoma within the affected area. The patient has remained in satisfactory medical condition since then.

Our patient presented with diffuse ecchy-mosis over the nape of the neck, mild hypotension and a significant fall in her hemoglobin. She did not have any fullness of the soft tissue in the anterior neck nor had she complained of hoarseness or dysphagia. The possible causes for this bleeding could include unrecognized local trauma or the recent change in her dialysis

modality and the use of heparin during each dialysis. Absence of coagulation and bleeding test abnormalities, and the fact that this has been the only hemorrhagic episode this patient ever had, precludes the role of uremia. The spontaneous pattern of bleeding in our patient was similar

to that seen in uremic patients developing subdural hematoma [2].

The anterior neck is shaped like an inverted triangle, bounded laterally by the two sternocleidomastoid muscles, superiorly by the mandible and inferiorly by the supraster-nal notch. Unintended hyperextension of the cervical spine, especially affected with changes in osteoarthritis, can overstretch the muscles of the neck with resulting hemorrhage in the soft tissue. The bleeding in our patient had occurred behind pharynx and trachea, and it manifested itself as diffuse ecchymosis, both posteriorly and laterally. In contrast, the bleeding in locations anterior to the trachea for example in the thyroid or hyperplastic parathyroid glands, usually spreads anteriorly and downward into the anterior chest and breasts [5]. This can be associated with hoarseness and dysphagia. The retropharyngeal location of the hematoma on X-ray of the cervical spine and the absence of acute hypercalcemia excluded

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bleeding in the parathyroid glands in our patient [6].

Overall management of uremic patients with spontaneous retropharyngeal bleeding includes a conservative approach, such as observation with or without blood transfusions, and, if need arises, infusion of fresh frozen plasma [7] or administration of de-samino-D-arginine vasopressin [8]. Surgical intervention is indicated only if the patient does indeed develop hemodynamic instability or compression symptoms of the local organs.

Fig. 2. Diffuse ecchymosis over the nape of neck and both shoulders.

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