Clinical Case

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A Rare Complication of Left Open Adrenalectomy

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Rezumat

O complicație rară a intervenției de adrenalectomie stângă deschisă

Scurgerea de lichid limfatic după adrenalectomie stângă deschisă este o complicație destul de rară. Am descoperit cazul unui pacient tânăr, operat pentru feocromocitom localizat la nivelul glandei suprarenale stângi, la care s-a efectuat conversia de la adrenalectomie stângă laparoscopică la chirurgie deschisă din cauza unor adeziuni dense. După operație, pacientul a prezentat scurgere de lichid limfatic în a doua zi postoperatorie. Acesta a fost tratat conservator printr-o dietă bogată în proteine și ulei cu conținut crescut de lipide cu lanț mediu. Cazul prezentat pune în evidență această complicație neobișnuită a intervenției de adrenalectomie stângă și modul în care aceasta poate fi soluționată.

Cuvinte cheie: scurgere de lichid limfatic, adrenalectomie stângă deschisă

Abstract

Chyle leakage after left open adrenalectomy is a quite rare complication. We encountered a young male patient who was operated for left adrenal pheochromocytoma, left laparoscopic

adrenalectomy converted to open due to dense adhesions. Postoperatively patient developed chylous fluid drainage on day 2. He was managed conservatively with high protein and MCT oil diet. This case highlights the unusual complication of left adrenalectomy surgery and how it can be managed.

Key words: chyle leakage, left open adrenalectomy

Introduction

Incidence of post-operative chylous ascites remains rare, however, surgical interventions especially retroperitoneal lymph node dissections are one of the major causes of chylous ascites. (1) Kaas et al. (2) reported an incident rate of 1.1% in all cancer patients undergoing abdominal surgical procedures, or of 7.4% in patients with high risk procedures. Adrenal surgery is one of the rarest causes of chyle leakage. P. de Sousa et al. (3) reported chylous ascites after trans-peritoneal laparoscopic adrenalectomy. We could not find any other case report after extensive search, hence the need for reporting our experience with chyle leak after adrenalectomy and its management.

Case report

A 20-years old male patient reported with headache, diaphoresis and palpitations for past 5 years duration. He was taking antihypertensive medications on and off for hypertension. Upon evaluation his 24 hr urine metanephrine was 150 and 24 hr urine nor-metanephrine was 6537. His serum cortisol level was suppressed on overnight dexamethasone suppression test. His

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Figure 1. Contrast Enhanced Computed Tomography (CECT) scan showed a well defined hypodense heterogeneously enhancing lesion in the left adrenal gland (45 x 27 mm) with calcifications within it

contrast enhanced computed tomography (CECT) scan showed a well defined hypodense heterogeneously enhancing lesion in the left adrenal gland (45 x 27 mm) with calcifications within it. (Fig. 1) A non enhancing hypodensity was noted within the lesion and there was no fat content. Lesion showed intense arterial enhancement persisting into porto-venous phase. Lesion had 42-44 HU attenuation on NCCT which increased to 150-160 HU on arterial, 150-155 HU portal and 120 HU venous phase. Few subcentimetric lymph nodes were seen. With this, diagnosis of left adrenal pheochromocytoma was made and after adequate pre-operative preparation, patient was posted for left retroperitoneoscopic adrenalectomy which was converted to open thoraco-abdominal adrenalectomy due to dense adhesions. No other intra-operative difficulty encountered apart from adhesions. Immediate post-operative period was uneventful with normal blood pressure and sero-sanguinous drainage in the range of 100 to 50 ml for first 3 days. On POD 4 patient had milky white turbid drainage, approximately 300 ml. (Fig. 2) Clinically and microscopically chyle was confirmed. Patient was started on high protein and MCT oil diet. On POD 5 chyle leakage decreased to 100 ml and on POD 6 almost nil. Patient was discharged on POD 8.

Discussion

Cysterna chyli, anatomically located anterior to the second lumbar vertebra, receives lymph from right and left lumbar and intestinal trunks. Extensive retroperitoneal surgeries e.g. retroperitoneal lymph node dissections can result in injury to these trunks or cysterna chyli itself leading to chyle leak. In this case extensive retro-peritoneal dissection was not done, even then chyle leak happened. It may be due to injury to minute lymphatic vessels by electro-cautery. Small chyle leak can be detected intra-operatively and can be repaired. But in most cases small leak persists (4). The diagnosis of chylous leakage is confirmed by its typical milky white appearance as

Figure 2. Post-operative day 5 photograph of patient with drainage tube in-situ and milky white chyle in the drain

Figure 3. Pictorial depiction of lymphatic drainage and possible site of damage of lymphatic duct during left adrenalectomy (Marked with thick arrow)

well as by laboratory analysis of the fluid that consists of high amounts of triglycerides but small amounts of cholesterol (5). Loss of chyle into peritoneal cavity can lead to serious consequences because of the loss of essential proteins, lipids, immunoglobulins, vitamins, electrolytes, and water. If drain is not placed then repeated therapeutic paracentesis provides relief from symptoms but the nutritional deficiency will continue to persist or deteriorate unless definitive therapeutic measures are instituted to stop leakage of chyle into the peritoneal space (6). In case of persistent chyle leakage even after dietary interventions, case reports have suggested that both somatostatin and octreotide either alone or in combination with TPN are effective in the management (7). Occasionally, surgical intervention should be considered when medical treatment failed (8). In our case neither TPN nor octreotide was used.

Learning points

Although rare, complication of chyle leakage should always

be kept in mind after adrenalectomy. To our knowledge, this is only the second such case reported to date.

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