

## A Rare Case of Iodide Mumps after Percutaneous Interventional Liver Transarterial Chemoembolization

### Perkütan Transarteriyel Kemoembolizasyon Sonrası Nadir Görülen İyoda Bağlı Sialadenit Vakası

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#### ABSTRACT

Iodide-induced sialadenitis (iodide mumps) is a rare complication of iodide-containing contrast media administration. The phenomenon is, in fact, a form of aseptic sialadenitis and is characterized by acute swelling of the salivary glands. The cause of this condition is not yet entirely clear, but reports have been published in favor of iodine concentration in the salivary glands. In this article, we present the first ever case of iodide-induced sialadenitis reported in our country, which arose following a percutaneous transarterial liver chemoembolization procedure.

**Keywords:** contrast media, iodide mumps, sialadenitis, side effect

#### ÖZ

İyotla tetiklenen sialadenit (iyodik kabakulak), iyot içeren kontrast madde uygulanmasının nadir bir komplikasyondur. Bu fenomen aseptik sialadenitin bir biçimidir ve tükürük bezlerinin akut şişmesi ile karakterizedir. Bu durumun nedeni tam olarak net değildir, ancak tükürük bezlerinde iyot konsantrasyonu lehine raporlar yayınlanmıştır. Bu yazıda, ülkemizde bildirilen perkütan transarteriyel karaciğer kemoembolizasyon prosedürünün ardından ortaya çıkan ilk iyoda bağlı sialadenit olgusu sunulmuştur.

**Anahtar Kelimeler:** Kontrast madde, iyodik kabakulak, sialadenit, yan etki

#### 1. INTRODUCTION

A very rare complication of iodinated contrast media administration is sialadenitis. In a very large cohort study involving 337,647 patients, various side effects of iodinated contrast media usage were evaluated, but no incidence of any form of sialadenitis was noted [1]. The first ever case report of sialadenitis as a complication of contrast media administration dates back to the year 1956 [2]. Here, we present a case of sialadenitis which manifested as a complication of iodinated contrast media administration to a 62-year-old male patient who had a moderately differentiated adenocarcinoma of the colon and who underwent a percutaneous transarterial liver chemoembolization (TACE) procedure.

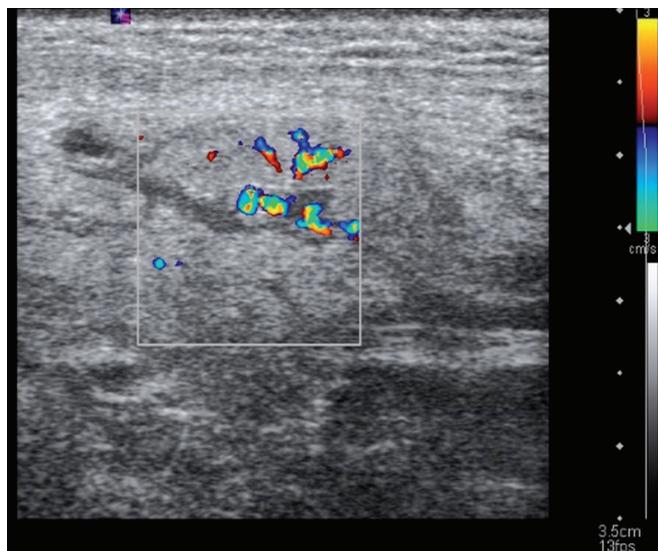
#### 2. CASE REPORT

A TACE procedure was performed on a 62-year-old male patient diagnosed with moderately differentiated adenocarcinoma of the colon for treating a single liver metastasis of a size of 32 × 25 mm, via a right femoral arterial approach. The procedure was performed by means of selective angiography, and irinotecan-loaded microparticles were used for the embolization procedure. A total of 80 cc of iodinated contrast media containing ioversol at a concentration of 350 mg/ml was administered during the selective angiography procedure. Approximately 10 h after the procedure, the patient started complaining of a swelling in his neck region. A color Doppler ultrasonography (CDUS) examination was performed, and swelling of the bilateral submandibular and parotid glands was demonstrated (Figure 1).

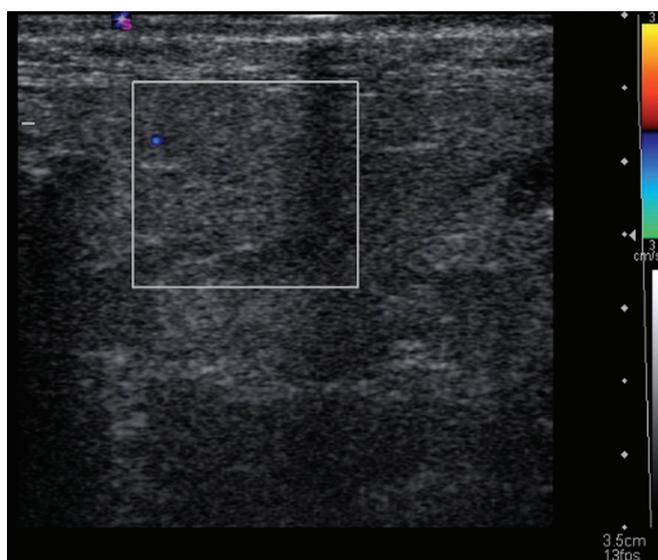
Complete blood count (CBC) and results of the renal function tests were within normal limits. We believed that the swelling of the submandibular region is a contrast media administration-associated side effect because swelling and tenderness occurred shortly after our treatment completion but was not accompanied by pain, fever, and leukocytosis. Medication was not administered because there were no other symptoms besides swelling. Five days after TACE procedure, the swelling had disappeared, and the dimensions of the glands recovered to normal (Figure 2).

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**Figure 1:** Color doppler ultrasonography examination demonstrating diffuse swelling, prominent internal low echoic septa and increased vascularity of the submandibular glands



**Figure 2:** 5 days after the TACE procedure, the swellings were gone, vascularity and the dimensions of the glands were regressed to the normal

### 3. DISCUSSION

Sialadenitis arising as a complication of iodinated contrast media utilization is a rare side effect. The main US findings for this condition are swelling of the salivary glands, which are more prominent in the submandibular glands, as well as internal hypoechoic septae formation in the glands with no increase in gland vascularity [3,4]. The mechanism of this sialadenitis process is not yet clear. A similar situation has been reported following an endoscopy procedure, but

there has been no clear explanation to that phenomenon either [5]. However, this phenomenon may be considered to be an idiosyncratic reaction [6]. It has been previously demonstrated that the risk of developing this complication is associated with iodine concentration in serum [6,7]. Since 98% of injected iodide is eliminated by the kidneys, poor renal function was considered to be responsible to cause this side effect; however, Zhang et al. found via their literature review that only 11 of the 36 cases had renal failure [6]. Renal impairment may be a minor risk factor, which potentially leads to impaired iodide elimination and results in iodide accumulation in the salivary gland thereby causing intoxication and inflammatory swelling. However, a majority of the times, sialadenitis has been reported in patients with normal renal function; hence, it is suggested that other factors may be responsible for this condition [6]. It has also been reported that the disease recurs after repeated contrast media administrations and that it develops and heals faster with every repeating occurrence of sialadenitis [7]. But in our patient, the situation was considerably different because our patient had previously undergone 10 procedures in which iodinated contrast media was administered, including a TACE procedure that was performed for a lesion at segment 6 of the liver, but no such complications arose until the final and 11<sup>th</sup> administration of the contrast media. In conclusion, we would like to draw attention to the fact that sialadenitis is a rare complication which must be kept in mind when iodinated contrast media is utilized both diagnostically and interventionaly. Possessing a good command of knowledge about the situation will improve patient condition and treatment provided by medical staff because this complication rarely necessitates therapy; and if therapy is ever warranted, then the manifestation of this condition is always symptomatic and simple to treat. By knowing these facts, patients suffering from this complication can be spared of unnecessary diagnostic and therapeutic measures.

The authors declare that there are no conflicts of interest regarding the publication of this paper.

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