

CASE REPORT

Galactorrhoea: Report of Two Cases

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ABSTRACT

Galactorrhoea has varied causes including physiological as in pregnancy, lactation, stress, or it can be pathological or drug induced. Its evaluation comprises of a thorough history, physical examination, laboratory tests and imaging studies. We report herewith two interesting cases of galactorrhoea. The first case was a rare adverse effect of a commonly used drug (domperidone and rabeprazole) and the second case was of mild hypothyroidism leading to galactorrhoea. Prolactin levels were normal in both the cases, emphasizing that not every case of galactorrhoea is associated with high serum levels of prolactin. Secondly, galactorrhoea may be present in patients who are clinically euthyroid, in such cases dynamic tests of thyroid function can identify the cause of galactorrhoea.

Keywords: Galactorrhoea, domperidone, hypothyroidism, euthyroid, prolactin

INTRODUCTION

Galactorrhoea, or inappropriate discharge of milk containing fluid from the breast, is a relatively common condition experienced by around 20 to 25 percent of women at some time in their life. Galactorrhoea has a long list of causes both physiological and pathological (Table 1). It can be caused by many drugs and herbal medicines including phenothiazines, metoclopramide, α -methyl dopa, ranitidine, amitriptylline, red clover, blessed thistle, fennel, fenugreek seed (Table 1) (1). Though the incidence of galactorrhoea is variable, it can occur in 90 percent of women with hyperprolactinemia (2).

We describe here two cases of galactorrhoea.

Case 1

A 35-year-old female, housewife by occupation, non-smoker, non-alcoholic, presented to the out-patient department of our hospital with the complaints of diarrhoea and dyspepsia. The patient was prescribed tablet metronidazole 400 mg TDS, tablet esogard (rabeprazole 20+ domperidone 30 mg) OD. Syp ulgel (magaldrate 400 mg, simethicone 20 mg/5 mL) TDS. After 3 days of treatment with the above drugs, she developed bilateral galactorrhoea.

On detailed history the patient was married for 17 years. Last delivery was 8 years back.

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Her menstrual cycle was regular. During physical examination, visual field was normal, oozing of milk was present from bilateral breasts, without any palpable mass.

The laboratory examination showed normal levels of thyroid hormones (TSH- 3mIU/L) and prolactin (12 ng/mL).

She was diagnosed as a case of drug (rabeprazole and domperidone) induced galactorrhoea.

Case 2

A 48-year-old housewife presented with galactorrhoea for the past one month. The patient was a known case of hypothyroidism and hypertension for the past 7 years. She was on treatment with thyronorm (thyroxine Sodium) 100 µg OD, telmisartan 40 mg OD. The patient also developed dyslipidemia (3 years back) and diabetes (1 year back) for which the patient was started on lipikind (atorvastatin) 40 mg OD and metformin 500 mg TDS. One year back the patient’s physician reduced the dose of thyronorm to 50 µg. More recently, she was also diagnosed as a case of silent asymptomatic coronary artery disease. Menopause occurred 2 years ago.

On breast examination, the patient had secretion from both the breasts only on pressure.

The laboratory examination showed normal levels of T3, T4 with a raised TSH- 7.41 mIU/L, the prolactin levels (10 ng/mL) were normal. A magnetic resonance imaging scan of the head demonstrated no abnormality of the pituitary gland, Other investigations included a fasting sugar -143 mg/dl, postprandial sugar -162 mg/dl, HbA_{1c} -6%, total cholesterol -175 mg/dl, triglyceride -219 mg/dl, HDL -46 mg/dl, LDL -85 mg/dl, X Ray chest - cardiomegaly, ECG-T waves were inverted in V₁-V₄.

Based on the history and clinical findings diagnosis of hypothyroidism induced galactorrhoea with normal prolactin levels was made.

Cytological examination of mammary discharge could not be performed (patient’s reason) however clinically both the patient were examined and showed no signs of malignancies. □

DISCUSSION

Domperidone is generally a safe drug, it does not cross the blood-brain barrier and is therefore virtually free of central adverse ef-

fects (3). Galactorrhoea is a very rare side effect of Domperidone. It was reported first by Moriga in 1981 (4). Subsequently Cann et al in their clinical trial compared the effect of domperidone (20 mg four times a day) with identical placebo. The authors reported seven patients with complaints of galactorrhoea and mastalgia. The onset of galactorrhoea ranged from 3 days to 3 months of continuous treatment with domperidone (4). This has also been reported from India, first in 1991 (5) and recently it has been documented by P Agarwal et al and Poovathingal et al (6,7).

Not many reports of hyperprolactemia and galactorrhoea because of proton pump inhibitors are available in the literature. Izquierdo Prieto et al in 2004 reported a case of galactorrhoea in a 21 year old man taking lansoprazole (8). Jabbar et al reported a rare case of a 13 year old girl who manifested with hyperprolactinaemia and galactorrhoea induced by 4 days treatment with omeprazole. The galactorrhoea resolved after omeprazole was discontinued. The same patient developed hyperprolactinaemia and galactorrhoea with domperidone and lansoprazole on separate occasions (9).

Tumors	Prolactinoma, craniopharyngiomas, bronchogenic carcinoma, renal adenocarcinoma and Hodgkin’s and T-cell lymphomas
Diseases	Hypothyroidism, Chronic renal failure, sarcoidosis, tuberculosis, schistosomiasis, herpes zoster, atopic dermatitis, acromegaly.
Miscellaneous	Chest wall irritation, burns, breast surgery, spinal cord injury or surgery, idiopathic
Drugs	
Histamine H2- receptor blockers	Cimetidine, famotidine, ranitidine
Proton pump inhibitors	Lanzoprazole
Antiemetics	Domperidone, metoclopramide
Antihypertensives	Atenolol, methyldopa, reserpine, verapamil
Antidepressants and anxiolytics	Alprazolam, buspirone, moclobemide amitriptyline, amoxapine
Antipsychotics	Chlorpromazine, prochlorperazine, haloperidol
Selective serotonin reuptake inhibitors	Citalopram, fluoxetine, paroxetine, sertraline
Hormones	Conjugated estrogen, medroxyprogesterone, oral contraceptives, octreotide,
Other drugs	Amphetamines, anaesthetics, arginine, cannabis, cisapride, danazol, dihydroergotamine, isoniazid, opiates, sumatriptan, valproic acid

TABLE 1. Various causes of Galactorrhoea (1).

Literature documents the association of galactorrhoea, amenorrhoea, primary hypothyroidism and hyperprolactinaemia (10). However, galactorrhoea, amenorrhoea, and hyperprolactinaemia may be present in patients who are clinically euthyroid and have normal concentrations of thyroxine, triiodothyronine and basal thyroid stimulating hormone (11).

Grubb et al presented the case of two female patients with hypothyroidism, galactorrhoea, and amenorrhoea who had hyperprolactinemia along with pituitary hyperplasia. The patients were given thyroxine therapy. Subsequent radiologic and endocrine studies documented resolution of their "pseudotumors" and normalization of the serum T4 and prolactin levels (12). Kashyap reported a case of autoimmune thyroid disease leading to pituitary hyperplasia, and presenting with galactorrhoea. The patient was started on thyroid hormone replacement and within three months the galactorrhoea subsided (13).

It has been documented that galactorrhoea can be present even with subclinical hypothyroidism. Takai et al found 5 patients with subclinical hypothyroidism presenting with galactorrhoea. Serum T4 was in the lower level of the normal range, but serum T3 was normal (T4: 6.3 +/- 1.2 µg/dl, T3: 113 +/-7 ng/dl). Basal serum TSH and prolactin were slightly increased only in 2 and 1 cases respectively. The patients were treated with an increased dose of T4 (150-200 µg/day). Recurrence of galactorrhoea was not observed (14).

Furthermore, Shilo and Hirsch reported a case of galactorrhoea where TSH and prolactin were very mildly elevated and TRH test showed an exaggerated response. Treatment with T4 decreased the TSH and prolactin levels to within the normal range, and prevented galactor-

rhoea (15). Galactorrhoea with normal serum prolactin levels has been recently reported (6).

In patients with primary hypothyroidism galactorrhoea is a rare feature as compared with the typical symptoms such as easy fatigability, weight gain and cold intolerance. However, case reports are there which documents that primary hypothyroidism can present only with galactorrhoea and pituitary mass (16). Furthermore, Rajput et al also described a case of 32-year-old female presenting primarily with galactorrhoea and secondary amenorrhoea. Laboratory investigations showed raised serum prolactin, and MRI brain showed enlarged pituitary. The clinical and biochemistry evaluation were suggestive of primary hypothyroidism. The patient was prescribed levothyroxine replacement and at 6 weeks follow-up, her serum prolactin came down to normal, galactorrhoea subsided, and spontaneous menstrual cycles resumed (17).

The first case report highlights an interesting observation of galactorrhoea induced by commonly used drug combination of rabeprazole and domperidone at therapeutic dosage. Second case, highlights the fact that in patients with galactorrhoea, subclinical hypothyroidism should be ruled out even when serum T4, T3, and prolactin are in normal range.

Learning points

- Galactorrhoea can be a rare adverse drug reaction of domperidone and rabeprazole.
- Not every case of galactorrhoea is associated with high-serum prolactin.
- Galactorrhoea can be present even with subclinical hypothyroidism.

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