Supplementation with hydrocortisone on the 3rd–5th day following dexamethasone premedicated chemotherapy eliminated severe dizziness and postural hypotension

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Abstract

We present the case of a 60 year-old woman with a stage III fallopian tube cancer submitted to hysterectomy and bilateral salpingo-oophorectomy with partial omenectomy, followed by six courses of chemotherapy and revision surgery. After each course of chemotherapy (paclitaxel + carboplatin) preceded by premedication with dexamethasone, she suffered from side-effects, of which the most unpleasant was severe dizziness appearing on the third, fourth and fifth day following the listed combination of drugs. It was revealed that dizziness with concomitant sweating and rapid pulse, noted in the standing position, was combined with marked postural hypotension. Considering the possibility of a temporary pituitary-adrenal axis suppression caused by premedication with a very large dose of dexamethasone, during those three days she was supplemented with small doses of hydrocortisone, which caused almost complete disappearance of the mentioned symptoms. Our conclusion is that postural hypotension causing severe dizziness initially linked with chemotherapeutic drugs can be eliminated or markedly reduced by three days supplementation with hydrocortisone applied after the expected wash out of the dexamethasone.

Key words: dexamethasone, premedicated chemotherapy, postural hypotension

CASE REPORT

In a previously healthy 60 year-old woman, a small enlargement of the right ovary was incidentally detected on a regular control USG investigation. Blood tests, including tumour markers, were within normal limits, and on examination she did not present any suspicious symptoms. She subsequently underwent total hysterectomy and bilateral salpingo-oophorectomy with partial omenectomy. Histological diagnosis of fallopian tube cancer (10 mm nodule) stage III was established. She was referred to the Oncological Institute M. Sklodowska-Curie, in Warsaw, for six consecutive courses of standard chemotherapy (paclitaxel + + carboplatin) preceded by premedication with dexamethasone. After the second course, she underwent a revision surgery for residual omenectomy and lymphadenectomy.

Following each course of chemotherapy, she suffered from side effects, including facial flushing, muscle and joint pain starting usually on the second day after chemotherapy, and dizziness which became quite severe from the third up to the fifth day, and kept her bed-ridden. Moreover, she suffered some abdominal pain, without nausea or emesis. Following the third course of chemotherapy, blood pressure (BP) was measured several times during the day. It appeared that dizziness with concomitant sweating and a more rapid pulse (in the standing position) were caused by marked postural hypotension. This hypotension could be eliminated by the administration of hydrocortisone: on the third and fourth days, 20 mg p.o. in the morning 1 h before getting up from bed and 10–20 mg at 3 p.m., and on the fifth day 10–20 mg only...
in the morning — depending on the control BP results in the sitting and standing positions. The results of BP measured in the sitting and standing positions, before and after hydrocortisone supplementation, are presented in Table 1.

**DISCUSSION**

Dexamethasone used in a large dose as premedication preceding the standard dose of paclitaxel and carboplatin, has accepted antiallergic and antiemetic effects, although the mechanism of the latter effect is unknown [1, 2]. It is generally presumed that application of a single dose of glucocorticoids does not usually cause clinically relevant disturbance of the pituitary-adrenal axis, which would demand consecutive hydrocortisone supplementation. However, our observation was that a very large dose of dexamethasone (40 mg p.o. plus 20 mg i.v.), administered on the night preceding chemotherapy, caused a temporary cortisol deficiency, which became apparent after wash-out of the dexamethasone from the body on the third, fourth and fifth day.

Postural hypotension, dizziness, and non-characteristic abdominal pain, sometimes accompanied by muscle or joint pain, are frequently reported symptoms in patients with adrenal insufficiency. In our case, dizziness and postural hypotension, initially linked with chemotherapy, caused a temporary cortisol deficiency, which became apparent after wash-out of the dexamethasone from the body on the third, fourth and fifth day. Therefore, the recently proposed need for close cardio-oncological co-operation [5] could be in some cases extended to a combined onco-cardio-endocrinological team.

**Conflict of interest:** none declared

**References**