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CASE REPORT

Serious allergic reaction to administration of epirubicin

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ABSTRACT

A 47-year old woman was admitted for adjuvant treatment with chemotherapy consisting of epirubicin and cyclophosphamide. During the second course of chemotherapy an allergic reaction occurred after administration of epirubicin. Treatment with clemastine 2 mg iv caused a quick recovery and after 24 hours there was only a slight redness of the face.
A discussion follows on allergic reactions to antracyclines and the literature is updated.

INTRODUCTION

Pharmarubicin (epirubicin) is frequently used in the treatment of breast cancer. Known adverse effects are nausea, vomiting, alopecia and bone marrow suppression. We describe a patient with a serious allergic reaction following administration of epirubicin.

CASE REPORT

A 47-year-old woman was admitted for adjuvant treatment after a modified radical mastectomy, according to the Patey-Madden procedure, for breast cancer. Histological examination showed lymph node metastases in 1 out of 17 axillary lymph nodes. Her medical history was uneventful. She had had no allergic reactions in the past. Chemotherapy consisted of cyclophosphamide 500 mg/m^2 and epirubicin 70 mg/m^2 intravenously. As antiemetic treatment, oral granisetron was given. The first course was well tolerated apart from slight nausea. After three weeks the second course was given and during administration of epirubicin the patient complained of itching in the neck region after a few minutes, followed by a generalised urticarial exanthema. There was no drop in blood pressure. After administration of clemastine 2 mg iv, the exanthema diminished. The cyclophosphamide was given after one hour without any complications. Twenty-four hours after the chemotherapy only a slight facial redness remained. During the third and fourth course of chemotherapy clemastine 2 mg iv and dexamethasone 8 mg iv were added to the oral antiemetic medication. Nevertheless the same allergic reaction occurred, which was more severe than in the second course. There were no other allergic reactions.

DISCUSSION

Allergic reactions to antracyclines are well known, though rare. In 1984, Solimando reported three patients with rash and urticaria after administration of doxorubicin hydrochloride (adriamycin).[1] The symptoms developed immediately after the doxorubicin infusion was started; in one out of three patients angio-oedema occurred followed by a slight drop in blood pressure and a tachycardia. None of the patients became bronchospastic. In two patients antihistamines were given, which improved the allergic symptoms and adriamycin could be administered after one hour without any problems. During the next courses no antracyclines were given. In one of the three patients treatment was continued and during the following five courses of doxorubicin, antihistamines were given orally.

During each course comparable allergic reactions occurred. Turtle described three patients out of 17 treated for breast cancer with a regimen containing epirubicin.[2] Besides a slight raise in temperature in one of these three patients, no abnormalities occurred during the first course. In two out of the three patients a raise in temperature to 40°C developed during the second course and in one of three patients during the third course after administration of chemotherapy, accompanied by a raise in body weight and a skin reaction. A severe drop in blood pressure occurred accompanied by severe hypoxaemia. Antihistamines were not given.

Wilson reported a patient with local induration and fading of the skin considered to be extravasation.[3] Three weeks later epirubicin is administered in the other arm and two weeks later pain and swelling developed in the region of the former extravasation. Plastic surgery followed within 24 hours. The histological examination of the removed tissue showed lymphocytic infiltration.

Finally, Cassidy reported a patient with extravasation during the second infusion of epirubicin.[4] Urticarial reaction developed during the following infusion three weeks later in the other arm. The infusion of epirubicin was discontinued and the skin reaction resolved within 20 minutes. Three weeks later the urticarial lesions situated on bifurcations of veins appeared to become ulcers. Recovery occurred within three months. Antracyclines are no longer administered.

CONCLUSION

The literature describes various types of reactions after administration of antracyclines. High doses of epirubicin can cause high fever, hypertension and hypoxia within 24 hours of administration, in addition to skin reactions. Other symptoms seem to be related to extravasation and the concentration of epirubicin locally within the veins. In our patient a type I allergic reaction occurred. If precautions are taken, this kind of allergic reaction does not need to prevent further administration of effective chemotherapy.

REFERENCES

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