

LETTER TO THE EDITOR

METRONIDAZOLE EXTRAVASATION CAUSING DIGITAL GANGRENE

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Sir,

Extravasation of some drugs viz. noradrenaline, dopamine, Penicillin etc. is known to be associated with local or distal complications resulting from intense arterial spasm or thrombophlebitis sometimes resulting in gangrene (1). We have come across gangrene of the skin and fingers developing after metronidazole infusion extravasation.

Case Report

A 45 years old non-diabetic normotensive male presented with vomiting, watery diarrhoea and fever of acute onset. On examination, he was febrile, toxic and mildly dehydrated. His pulse was 110/min and blood pressure 96/70 mmHg. The abdominal examination revealed no organomegaly, no distension, vague diffuse tenderness on deep palpation and normal bowel sounds. There was no other abnormality detectable on systemic examination. Laboratory investigations revealed normal routine biochemistry, mild neutrophilic leucocytosis and negative stool culture for pathogens. He was put on oral norfloxacin 400 mg twice daily and intravenous normal saline.

He however, continued to have diarrhoea and developed abdominal distension with sluggish bowel movements on third day. Repeat laboratory investigations including serum electrolytes and renal functions were normal. On surgical advice he was put on treatment for paralytic ileus with nasogastric suction, parenteral fluids, ampicillin injections and metronidazole infusion.

Following inadvertent unnoticed extravasation of about 50 ml of metronidazole solution in the dorsum of right hand patient developed intense pain and swelling in the area of extravasation. The metronidazole infusion was discontinued and patient observed. On the following day, his fingers and dorsum of right hand showed blackening. The arterial pulses, including right brachial and radial, were normal and there was no other systemic or skin abnormality to explain this complication. The laboratory data including coagulation profile, blood counts, platelets, skiagram of chest and echocardiography (for any source of embolus) were normal. Aspirin, pentoxifylline and nifedipine were administered in an attempt to reduce the area of gangrene. However, full blown gangrene of the skin of dorsum of right hand and distal half to one third of all fingers but not thumb, was obvious during next few days.

The causal relationship of metronidazole extravasation and gangrene was obvious since the patient had received intravenous fluids and ampicillin injections through the other forearm vein. There was no evidence of any coagulation abnormality or any systemic disease or any detectable source of arterial embolus to explain local gangrene. Gangrene of fingers and skin can occur in variety of conditions associated with vasculitis or following arterial embolism. There was no evidence of vasculitis nor was any source of embolus detectable in our patient. The localisation of gangrene to right hand and fingers correlates with drug extravasation.

Some drugs, such as penicillin (2) and barbiturates (3), which have no significant vasoconstrictor effect when given orally or intravenously may rarely cause intense arterial spasm if accidentally injected near an artery or reaches thereby spread

from the site of an im or iv injection. Such reaction is not reported with metronidazole (4, 5, 6). The purpose of this report is to make people aware about such possibility so that more care is observed during metronidazole infusion therapy.

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