On-line Case Report

Inadvertent central venous infusion of enteral feed: a case report

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ABSTRACT

Inadvertent administration of enteral feed into an intravenous line is preventable usually by design of incompatible connectors, but these may not be available universally. We discuss a case report where this occurred and the subsequent management strategy.

Keywords: Enteral feed – Intravenous line

Inadvertent administration of enteral feed into an intravenous line is preventable usually by design of incompatible connectors, but these may not be available universally.

Case report

A 60-year-old woman with gastric outlet obstruction, from presumed inoperable carcinoma gallbladder, underwent palliative gastrojejunostomy. Intra-operatively, a Ryle's tube was placed into the efferent loop. She commenced enteral feeds via the Ryle's tube (day 3). Inadvertent connection of enteral feed to the central venous cannula occurred (day 5) which was stopped after 15 min (approximately 25 ml administered). She developed chills and tachypnoea. The central line was removed. She received pethidine, promethazine and pheniramine and given piperacillin + tazobactam after taking blood cultures. She became tachycardic and tachypnoeic but normotensive with normal oxygen saturation until becoming hypotensive 90 min later.

She was transferred to the intensive therapy unit

where she received noradrenalin, vasopressin and dobutamine with hydrocortisone and fluid resuscitation. There was a later fall in oxygen saturation from pulmonary oedema which improved with frusemide; she did not need intubation. She was receiving prophylactic, low-dose, unfractionated, heparin peri-operatively. Haematology: INR 1.46, fibrinogen and APTT within the normal range; there was no bleeding. Prophylactic heparin was continued.

Blood culture grew *Klebsiella* spp. and *Enterococcus* spp. sensitive to first-line antibiotics. Piperacillin-tazobactam was continued because of persistent tachycardia and leukocytosis. She remained afebrile; tachycardia and leukocytosis gradually resolved and she was discharged (day 15).

Discussion

There have been very few reports of inadvertent central venous infusion of enteral feed.¹ Connector incompatibility prevents this event.

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Enteral feed has a high bacterial load.² The particulate nature of the feed causes a form of pulmonary embolism.³ Anaphylaxis may result because many feeds are milk-product based. The osmolarity is usually high and this may contribute to the injury.

Principles of aggressive treatment include correction of altered osmolarity, management of micro-embolism, hypersensitivity and septicaemia. Blood cultures should be taken and broad-spectrum antibiotics started immediately. Patients should receive oxygen and be monitored for pulmonary thrombo-embolism and pulmonary oedema. Hypotension may be secondary to sepsis or anaphylaxis and needs aggressive fluid, vasopressor and inotropic support. Anticoagulation to prevent extension of pulmonary thrombo-embolism should be considered as well as monitoring for disseminated intravascular coagulation.

Conclusions

Connector incompatibility must be universal to prevent this occurrence.^{4,5} All lines to and from a patient should be labelled. Checking of infusions by two staff, even in places

where the connectors are not different, would help. Early, aggressive treatment usually results in good outcome.

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