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(RESEARCH ARTICLE)

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Necrotizing fasciitis of the abdomen after insulin therapy in type 2 diabetic patients, importance of therapeutic education: About 2 cases

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Abstract

Insulin therapy is part of the treatment of type 1 or type 2 diabetes; Therapeutic education occupies a fundamental place in the management, whose main objective is to improve glycemic control and prevent complications of diabetes; including infections at the injection sites.

Keywords: Insulin pens; Antihyperglycemic agent; Diabetes imbalance; Injection technique

1. Introduction

Insulin injection is one of the pillars of diabetes management; however, rigorous asepsis is necessary to avoid any infection at the insulin injection site, which would constitute an entry point. We report two cases of necrotizing fasciitis of the abdomen following an insulin injection in two type II diabetic patients.

1.1. Case Report 1

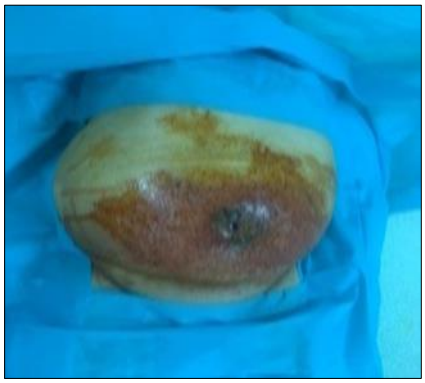

Figure 1 Necrotizing fasciitis of the abdominal wall

Figure 2 After necrosectomy

63 years old patient , diabetic for 15 years and taking 2 premixed drugs. He was admitted for a collection with blackish deposits in the periumbilical area (opposite the insulin injection site): Patient conscious, stable; peri-umbilical collection with areas of necrosis; work-up: infectious syndrome with hyperleukocytosis predominantly PNN CRP=367; venous glycaemia: 3.93 g/l; renal work-up: GFR=91.8 ml/min; abdominal CT: large infiltrating peri-umbilical mass. He underwent necrosectomy + TBA + intensification of insulin therapy regimen; reconstructive surgery is planned after healing of the infection.

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1.2. Case Report 2

50-year-old patient, diabetic for 22 years and on a 2 premixed and oral antidiabetic regimen. He was admitted for an inflammatory placard on the anterior abdominal wall after insulin injection, put on NSAIDs and then aggravation of the placard with the appearance of a central ulceration. The clinical examination showed a red, hot, painful and hard inflammatory placard on the anterior side of the abdominal wall of 10cm*13cm in the periumbilical area, with a central ulceration and a yellowish deposit. On examination: infectious syndrome: hyperleukocytosis at 20,000/mm3; CRP at 187; ultrasound of the soft tissues: edematous infiltration of the soft tissues of the abdominal wall, associated with multiple cystic pockets. he benefited from a necrosectomy + ATB + intensification of the insulin therapy regimen. a reconstructive surgery is planned after healing of the infection

Figure 3 Necrotizing fasciitis of the abdominal wall

Figure 4 After necrosectomy

2. Discussion

These two cases illustrate that negligent administration of insulin is not without consequences. Serious skin infections at insulin injection sites are a rare situation that can have a pejorative evolution and are essentially linked to the non-respect of hygiene rules, as in the case of necrotizing fascitis (necrotizing bacterial dermohypodermitis). It is a rare and serious condition. It mainly affects subjects with conditions that alter their immune status and expose them to a high risk of infection, notably diabetes.

In diabetic patients, understanding the disease and its treatment, and respecting the rules of asepsis before any therapy is essential, although cases of necrotizing fasciitis after insulin injection remain exceptional.

Several studies have shown that errors in the rules and techniques for self-injection of insulin are due to patients' lack of knowledge of the different stages of administration of insulin [1]. The various errors reported in the literature relate to injecting at the same site, injecting into areas of lipodystrophies, reusing needles, injecting through clothing and not mixing cloudy insulins before use. Most patients report that they have not been educated or initiated in the techniques of insulin injections. However, it is difficult to know if patients have not learned these skills or if they have simply forgotten them due to all information given to them. Nevertheless, the educator or health worker is required to constantly assess and reassess skill acquisition, not hesitate to repeat educational messages until patients understand the technique and why it is important [2,3].

3. Conclusion

These observations demonstrate that a simple insulin injection can, if not performed under strict aseptic conditions, lead to serious complications. It is therefore essential for patients to be fully involved in the management of their disease from the outset.

Compliance with ethical standards

Acknowledgments

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Disclosure of conflict of interest

No conflict of interest.

Statement of ethical approval

The present research work does not contain any studies performed on animals/humans subjects by any of the authors

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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