Peer Review File

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Reviewer A

Comment 1: Abstract- it is not known if incidence of acquired perforating dermatosis is lower in PD as not much is published about it in PD patients- so recommend the last line in background be removed or restricted.

- Reply 1: We appreciate the reviewer's comment. We acknowledge that the incidence of acquired perforating dermatosis in peritoneal dialysis (PD) patients is a less studied topic, and we have removed the last line of the abstract.
- Changes in the text: Background: Acquired Perforating Dermatosis (APD) is a heterogeneous group of unfrequented diseases (2.5 cases for 100 000 habitants) associated with multiple pathologies like end-stage renal disease and other concomitant conditions such as Diabetes Mellitus (DM).

Comment 2: Introduction- Line 62-66 recommend explaining the 3 different type more clearly. Line 72- unclear what is Gaint variant- authors do not explain it later in the manuscript either. Recommend explaining what the giant variant is either here or later in case 3 description. Line 78- unclear what the authors mean by "change to APD with glucose solutions" all PD either CCPD or APD is always done with glucose solutions. For all 3 cases: Would recommend to include PD adequacy as KT/V for atleast 1-3 months prior to development of lesion. Also, recommend including lab values of serum ca and phosphorus and PTH rather than saying "bad control" or "lousy control". Figure 1: please label in the figure as well with either asterix or arrows at the findings. Figure 3: need it to be more clear as the figure is not very clear about timeline.

Reply 2: We appreciate the reviewer for pointing out these areas that require additional clarity in our article.

- We have provided a clearer explanation of the three types of acquired perforating dermatosis (Line 60-65).
- The RPC is a rare entity, and therefore, there are no well-established criteria regarding the size of the lesions in the literature. However, based on the reported cases, the concept of a giant variant is associated with the size of the lesions. In a case described by Randie H. Kim et al., the giant variant is defined as lesions exceeding 2 cm in size, although there are even articles that consider lesions larger than 1 cm as giant variants, as shown in the review of four cases conducted by S.R. Hoque et al. Thus, following these terms, it has been determined that our case, with some lesions larger than 2 cm, can be classified as a giant variant. Our Case 3, as described in line 122, exhibits lesions that meet this criterion, thus justifying the classification as the giant variant (129-131). Furthermore, in lines 156-158 of the manuscript, we have provided a justification for labeling the lesions as the giant variant, considering their size with the references.

- Thank you for your insightful comment. It is indeed accurate that all forms of peritoneal dialysis (PD), including continuous cycling peritoneal dialysis (CCPD) and automated peritoneal dialysis (APD), commonly utilize glucose-based dialysis solutions. However, we would like to specify that there are alternative solutions available, such as those containing icodextrin, which were not used in our patients' treatment. In order to avoid any confusion, we have decided to specify the type of exchanges used in our three cases.
- We appreciate the reviewer's suggestion to include measures of peritoneal dialysis adequacy and relevant laboratory values to provide a more comprehensive assessment of the patients' condition. For all three cases, we have included information on peritoneal dialysis adequacy in terms of KT/V during the 1-3 month period prior to the development of the lesions and we have replaced the phrases "bad control" or "lousy control" with specific laboratory values.
- In response to your comment, we have made the necessary revisions to Figure 1 by adding labeled asterisks or arrows to indicate the relevant findings.
- In response to your suggestion, we have added titles to the timeline to enhance clarity in the figure.

Changes in the text:

- APD encompasses distinct subtypes based on the specific dermal component involved in the elimination process. These include Elastosis Perforans Serpiginosa, where abnormal elastic tissue fibers are eliminated; Reactive Perforating Collagenosis (RPC), which involves the elimination of altered collagen; Kyrle’s disease, characterized by the elimination of keratin; and Perforating Folliculitis, where the follicle content is removed, which may include collagen and elastic fibers.
- Lines 121-122: Concurrently, he developed extensive, keratotic, and highly pruritic skin lesions on his back, with some exceeding 2 cm in size. Lines 129-131: Considering the lesion size exceeding two centimeters, the diagnosis of a giant variant of reactive perforating collagenosis (RPC) was established. Lines 156-158: It is important to highlight that the final case represents a giant variant of RPC, characterized by the substantial size of the lesions (9,10).
- Lines 77-78: Dialysis, 9-hour schedule with 5 exchanges of 2000 cc of 2.27% and 1.36% glucose solutions. Lines 96-97: Two exchanges with a concentration of 2.27% and one exchange with a concentration of 1.36%.
- Lines 78-82: Despite the excellent adequacy (KT/V 2.5), one of the problems to be emphasized was the lousy control of disturbances of calcium-phosphate metabolism with phosphorus levels above 6 mg/dl, parathyroid hormone (PTH) above 500 pg/ml and phosphor-calcium product over 55 mg2/dl2. Lines 97-100: with optimal PD adequacy (December 2019: KT/V 2.5). Of note, he had poor control of disturbances of calcium-phosphate metabolism (December 2019: Calcium: 8.7 mg/dl, Phosphorus: 5.9 mg/dl, PTH: 360 pg/ml, 25-

hydroxyvitamin D: 13.7 ng/mL). Lines 117-119: One of the challenges in his management was the inadequate control of mineral bone metabolism, characterized by elevated phosphorus levels above 7 mg/dL and parathyroid hormone (PTH) levels exceeding 400 pg/ml.

- We have added labeled asterisks or arrows in Figure 1 to indicate the relevant findings.
- In response to your suggestion, we have added titles to the timeline to enhance clarity in the figure 3

Reviewer B

Comment 1: You mentioned that poor control of calcium and phosphorus metabolism may be associated with the development of APD in the present cases. However, you did not provide any information except for "poor control." To what extent did they have Ca and P disturbances? Please clarify these levels such as CaxP products or PTH in each case.

Reply 1: We appreciate the reviewer's suggestion to include relevant laboratory values to provide a more comprehensive assessment of the patients' condition. For all three cases, we have replaced the phrases "bad control" or "lousy control" with specific laboratory values.

Changes in the text:

- Lines 78-82: Despite the excellent adequacy (KT/V 2.5), one of the problems to be emphasized was the lousy control of disturbances of calcium-phosphate metabolism with phosphorus levels above 6 mg/dl, parathyroid hormone (PTH) above 500 pg/ml and phosphor-calcium product over 55 mg2/dl2. Lines 97-100: with optimal PD adequacy (December 2019: KT/V 2.5). Of note, he had poor control of disturbances of calcium-phosphate metabolism (December 2019: Calcium: 8.7 mg/dl, Phosphorus: 5.9 mg/dl, PTH: 360 pg/ml, 25-hydroxyvitamin D: 13.7 ng/mL). Lines 117-119: One of the challenges in his management was the inadequate control of mineral bone metabolism, characterized by elevated phosphorus levels above 7 mg/dL and parathyroid hormone (PTH) levels exceeding 400 pg/ml.

Comment 2: In cases 1 and case 2, you mentioned skin lesions improved after the isotretinoin treatment. Were any changes observed in the poor control of calcium and phosphorus metabolism after the treatment?

Reply 2: "No, the change in patients' progression was related to the administered treatment."

No changes in the text required.

Comment 3: Consider including details regarding the total volume and the type of dialysate such as glucose-based or icodextrin.

Reply 3: we have decided to specify the type of exchanges used in our patients.

Changes in the text:

- Lines 77-78: Dialysis, 9-hour schedule with 5 exchanges of 2000 cc of 2.27% and 1.36% glucose solutions. Lines 96-97: Two exchanges with a concentration of 2.27% and one exchange with a concentration of 1.36%.

Comment 4: It seems that there are many errors in selecting the upper or lower cases.

- P5L64: Reactive perforating collagenosis (RPC).
- P5L65: Perforating folliculitis
- P5L76: Continuous Ambulatory Peritoneal Dialysis (CAPD)
- P5L77: APD
- P8L132–134
- Footnote: Fig 1–4

Reply 4: Thank you very much for the feedback. I have reviewed the document and made the necessary capitalization changes.
Changes in the text: "I have made the necessary adjustments regarding the capitalization (upper or lower case) as suggested in the specified lines."
Comment 5: Fig3: Was case 3 not initiated? May be initiated?
Reply 4: Thank you for your comment regarding Case 3 in Figure 3. The patient in Case 3 was indeed a candidate for peritoneal dialysis once the situation arose. However, there was an unexpected worsening of renal function prior to the initiation.
No changes required.

Reviewer C
Comment 1: In the case 3, the authors diagnosed the patient as having 'a giant variant' of RPC.
As far as I understand, the characteristic of the variant is only the size of the lesions. I'm not sure about whether the concept of the variant is a widely accepted one or not, and in fact, there are some recent reports of APD with large lesions without mentioning this variant (Kimura A et al, J Eur Acad Dermatol Venereol, 2022, Kosumi H et al, Diabetes Care, 2019). It would be helpful if the authors add a mini-review discussing the variant in the view of the number of complications associated with the occurence of APD. Alternatively, the authors could omit mention of the variant.
Reply 2: The RPC is a rare entity, and therefore, there are no well-established criteria regarding the size of the lesions in the literature. However, based on the reported cases, the concept of a giant variant is associated with the size of the lesions. In a case described by Randie H. Kim et al., the giant variant is defined as lesions exceeding 2 cm in size, although there are even articles that consider lesions larger than 1 cm as giant variants, as shown in the review of four cases conducted by S.R. Hoque et al. Thus, following these terms, it has been determined that our case, with some lesions larger than 2 cm, can be classified as a giant variant. Our Case 3, as described in line 122, exhibits lesions that meet this criterion, thus justifying the classification as the giant variant (129-131). Furthermore, in lines 156-158 of the manuscript, we have provided a justification for labeling the lesions as the giant variant, considering their size with the references.

Changes in the text: - Lines 121-122: Concurrently, he developed extensive, keratotic, and highly pruritic skin lesions on his back, with some exceeding 2 cm in size. Lines 129-131: Considering the lesion size exceeding two centimeters, the diagnosis of a giant variant of reactive perforating collagenosis (RPC) was established. Lines 156-158: It is important to highlight that the final case represents a giant variant of RPC, characterized by the substantial size of the lesions (9,10).