Reviewer's report

Title: Power of computed-tomography-defined sarcopenia for prediction of morbidity after pancreaticoduodenectomy

Version: 0 Date: 18 Nov 2018

Reviewer: Nicola Panvini

Reviewer's report:

General Comments: In this paper the Authors aimed to evaluate the role of preoperative CT derived parameters in predicting complications after pancreaticoduodenectomy (PD). One hundred-thirty-nine patients who underwent CT before PD were enrolled in the study and followed-up for appearance of minor and major complications and pancreatic fistulas (POPF) in the post-operative period. Diameter of the pancreatic duct (DPD) and pancreatic parenchyma (DPP), area of subcutaneous adipose tissue (ASAT), visceral adipose tissue (AVAT), M. psoas (AMPSO), paraspinal muscles (AMSPI), ventral abdominal muscles (AMVEN), total area of muscle tissue (AMTOT), mean muscle attenuation (MA) and skeletal muscle index (SMI) were measured on pre-operative CT images. Statistical differences between patients with or without post-operative complications or POPF were determined by Mann-Whitney-U-Test and binary logistic regression was performed for multivariate analysis of imaging parameters between. DPD and MA were significantly lower in patients who showed major complications or POPF at follow-up and demonstrated an AUC of 0.638 and 0.723 for major complications and of 0.716 and 0.723 for POPF, respectively.

The study addresses an interesting topic and is well designed, nevertheless the manuscript lacks relevant information in Methods sections. Exposure of results it's quite confusing too. Please see specific comments.

Specific comments:

Title: ok

Abstract: ok

Keywords: add "Computed Tomography".

Background: ok

Methods:
Obtaining Clinical data
A brief description of Clavien-Dindo-Classification and ISGPF criteria should be provided in the text, or better yet, in a summary table.
Surgical procedure and perioperative management

Please specify mean follow-up time for major complications and POPF.
How POPF was diagnosed? Please specify.

Analysis of Radiological data

Detailed information about scan parameters, intravenous/oral CM administration and acquired post-contrastographic phases are required.

Please accurately describe methods for SMI and MA measurement. Thresholds' values for definition of sarcopenia should be reported too.

Please specify the timing of CT imaging analysis and if it was performed on unenhanced or contrast-enhanced images.

Results:

Imaging parameters:

P9L192-193: data reported in Table 1 show no significant differences for SMI. Please rewrite accordingly.

Discussion:

Overall too long, it should be shortened avoiding repeating results.

Potential clinical implications and feasibility of the proposed method in a routine clinical setting should be discussed by Authors.

References: ok.

Figures

Figures should be numbered in the order they are first mentioned in the text.

Tables: ok
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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