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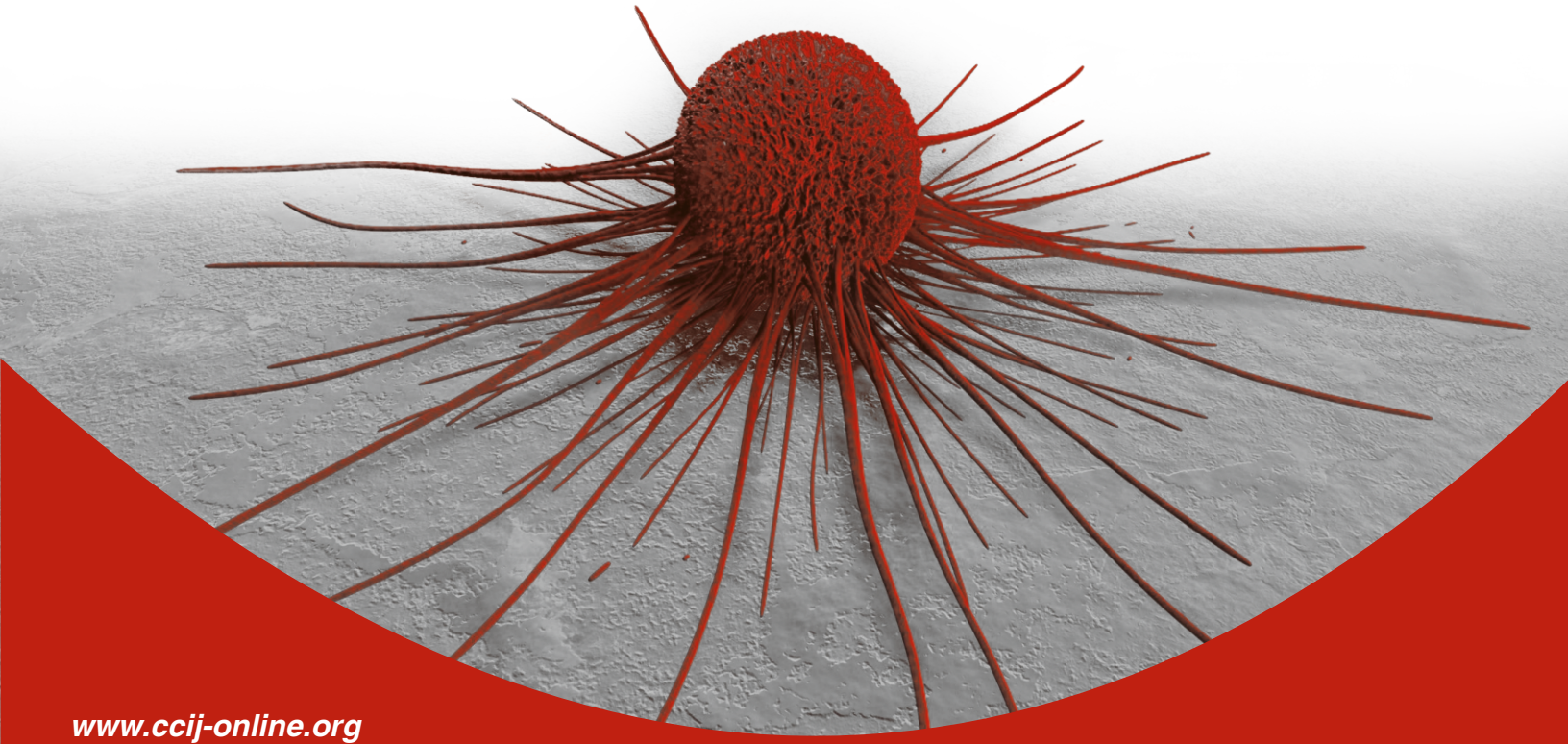

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Cell Block Procedure as a Relevant Diagnostic Tool in Human Pathology

Sir,

We have read with great interest the paper "Cell block preparation – An adjunct to fine-needle aspiration cytology – Unveiled the diagnosis" by Geethamala *et al*., which appeared in Clin Cancer Investig J 2017;6:219-22. The authors underlie that fine-needle aspiration cytology (FNAC) is a valuable diagnostic tool for the diagnosis of endometriosis, mainly when at least two components among sheets of epithelial cells, stromal spindle cells, and hemosiderin-laden macrophages have been documented.[1] Nevertheless, this diagnosis should frequently be confirmed after surgical excision of the affected samples to exclude other lesions, such as lipomas or other soft-tissue tumors, metastatic deposits, hernias, cysts, fat necrosis, hypertrophied scars, hematomas, and abscesses.[1] Therefore, it has been stressed the application of cell block procedure (CBP) to reveal the endometrial glands separated by endometrial stroma and siderophages, as elsewhere diagnosed as endometriosis by Dash *et al*.[2] Finally, the authors emphasize the use of CBP, together with FNAC, to help in the preoperative diagnosis of endometriosis and to facilitate the best management strategy.[1]

We fully agree with their conclusions and would stress the practical value of CBP, taking into great consideration the utility of this procedure, either associated or not with endoscopic ultrasound (EUS)-FNAC, in the diagnostic approach of pathological conditions.[3-5] In fact, CBP exhibits numerous advantages in comparison to routine smears; in particular, better preservation of cell architecture, achievement of usual hematoxylin-eosin staining, and possibility to perform immunohistochemistry or molecular analyses represent the most evident reasons to choose this method. Moreover, by this approach, the differential diagnosis in nonneoplastic and neoplastic conditions may be more easily achieved, avoiding the noise of background as well as contaminant elements.[3-5]

It is well known that diagnostic yield and accuracy for EUS-FNA also depend on the size of lesions and they are significantly lower in nodules <10 mm in size.[3-5] Generally, two to five needle passes are considered to be sufficient to obtain enough diagnostic material for a correct diagnosis by EUS-FNA;[3-5] however, the 22-gauge or 25-gauge is the most commonly used needle for the cytological sampling of pathological masses because of their easier penetration, without any further complication. Therefore, the authors have correctly utilized the 22-gauge to achieve useful additional cytologic material to perform CBP.[1] Consequently, CBP together with FNAC should be considered as a relevant part of diagnostic tools for the better management of human pathology. In addition, CBP may be relevant to reduce false negative diagnoses in EUS-FNA, which may depend on the availability of low cytological material and not only by erroneous interpretation of the cytological samples.[3-5] Moreover, this procedure also represents the most appropriate method to obtain serial sections for subsequent immunocytochemistry, allowing the evaluation of a large spectrum of antigens, as extremely useful aid to obtain an accurate diagnosis able to differentiate the primary or metastatic nature of lesions, taking into consideration the therapeutic treatment and prognosis should be greatly different to perform.

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Nil.

Conflicts of interest

There are no conflicts of interest.

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References

1. Geethamala K, Jadhav MN, Haravi RM, Kittur S. Cell block preparation – An adjunct to fine-needle aspiration cytology – Unveiled the diagnosis. Clin Cancer Investig J 2017;6:219-22.
2. Dash S, Panda S, Rout N, Samantaray S. Role of fine needle aspiration cytology and cell block in diagnosis of scar endometriosis: A case report. J Cytol 2015;32:71-3.
3. Ieni A, Barresi V, Todaro P, Caruso RA, Tuccari G. Cell-block procedure in endoscopic ultrasound-guided-fine-needle-aspiration of gastrointestinal solid neoplastic lesions. World J Gastrointest Endosc 2015;7:1014-22.
4. Ieni A, Todaro P, Crino SF, Barresi V, Tuccari G. Endoscopic ultrasound-guided fine-needle aspiration cytology in pancreaticobiliary carcinomas: Diagnostic efficacy of cell-block immunocytochemistry. Hepatobiliary Pancreat Dis Int

2015;14:305-12.

5. Ieni A, Barresi V, Reggiani Bonetti L, Branca G, Caruso RA, Tuccari G, *et al.* Cytohistological and immunohistochemical characteristics of spindle-shaped mesenchymal neoplasms occurring in the gastrointestinal tract. Scand J Gastroenterol 2017;52:291-9.

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