

EUS-guided fine needle biopsy (EUS-FNB) with 25 gauge EchoTip ProCore[®] needle of a subepithelial lesion in the distal duodenum



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A 79-year-old patient underwent computed tomography scan for surveillance of colon cancer and discovered an incidental 2 cm mass located in the distal duodenum. An upper gastrointestinal endoscopy revealed a bilobated subepithelial lesion (SEL) in the distal part of a winding duodenum. An endoscopic ultrasound (EUS) revealed a homogenous hypoechoic well-circumscribed tumor, originating from muscle layer (*Figure 1a*).

Two separate attempts of tissue sampling on EUS-guided fine needle aspiration (FNA), using first a 22 gauge and subsequently a 25 gauge traditional needle, were inconclusive, for several reasons: first, the location and the technical complexity reaching the lesion; second, we encountered several difficulties in penetrating the lesion because the scope, extremely angulated, became stiffer, limiting angulation. Indeed, we decided to use a 25 gauge EchoTip ProCore needle (Cook Medical) for tissue sampling.

This needle considerably reduced the previously mentioned difficulties in penetrating the lesion (*Figure 1b*) and, more importantly, allowed us to obtain a good tissue sampling. Histological examination showed a group of spindled-shaped cells (*Figure 2a*). The immunohistochemistry was positive for CD117 and CD34 (*Figure 2b*) while negative for desmin, smooth muscle actin and S-100 expression. A diagnosis of gastrointestinal stromal tumor (GIST) was done and the patient underwent surgical resection.

Transduodenal EUS-FNA is technically challenging due to the angulated position that may be an obstacle to the advancement of the needle through the scope and in the targeted lesion. Moreover, to avoid instrument damage, frequently the scope had to be withdrawn into the stomach so the tip could be straightened. For these reasons, when the echoendoscope is located in the duodenum, FNA is usually performed using either 22 or 25 gauge needles while use of the 19 gauge is rare.

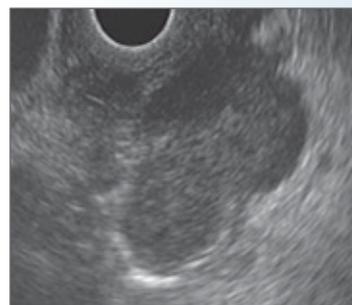


Figure 1a



Figure 1b

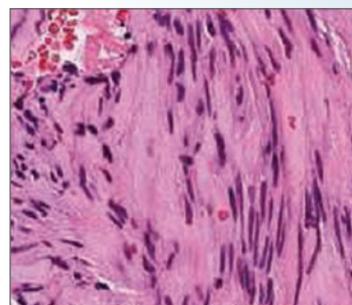


Figure 2a

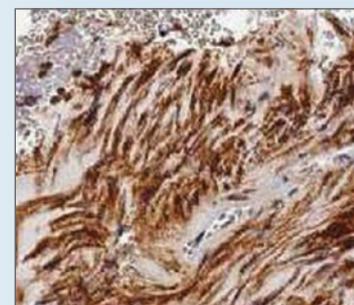


Figure 2b

For the diagnosis of SEL, usually adequate cytological sampling is needed, especially when immunohistochemical analysis is required. In these conditions, larger needles (19 or 22 gauge) should be preferred.

EchoTip ProCore needles have been conceived to obtain more tissue and ideally to provide histological specimens (core biopsies).

In our case, we were able to obtain histological diagnosis of a GIST located in the third part of a winding duodenum by using the smallest EchoTip ProCore needle available. This needle can be taken into consideration when larger needles fail to provide adequate tissue sampling of SEL located in the distal duodenum. ■