Association between recent pregnancy or hormonal contraceptive exposure and outcome of desmoid-type fibromatosis


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Purpose
The role of hormonal contraception or pregnancy on Desmoid-type fibromatosis (DF) outcome is a matter of debate.

Patient and methods
In the present study, we selected women patients with childbearing age from the prospective ALTITUDES cohort (NCT02867033). The primary endpoint was event-free survival, EFS. We estimated the risk of event according to hormonal contraception (estrogen-progestin, EP, and progestin) and pregnancy using multivariate time-dependent model, controlling for major confounders.

Results
242 patients with a median age of 34.7 were included. Abdominal wall was the most common tumor site (51%). Patients were managed by active surveillance (80%) or surgery (20%). Pregnancy occurred within 24 months before DF diagnosis, at the time of DF diagnosis and after DF diagnosis in 33%, 5% and 10% of cases, respectively. Exposure to hormonal contraception is documented within 24 months before diagnosis, at the time of diagnosis and after diagnosis in 44%, 34% and 39% of cases, respectively. The 2-year EFS was 75%. After adjustment for DF location, size, 1st-line strategy and hormonal contraception, we observed an increased risk of event in the 24 months after pregnancy (HR=2.09, p=0.018). In opposite, we observed no significant association between the risk of event and current EP-exposure (HR=1.28, p=0.65),
recent EP-exposure (within 1-24 month, HR=1.38, p=0.39), current exposure to progestin (HR=0.81, p=0.66), and recent exposure to progestin HR=1.05; p=0.91).

**Conclusion**
Recent history of pregnancy was found associated with an increased risk of progression/relapse in newly diagnosed DF, while hormonal contraception was not.