11554 **Poster Session**

First-in-human administration of CEB-01, a novel drug delivery implant matrix, in patients with recurrent or locally advanced retroperitoneal soft tissue sarcoma (RPS) after surgery: Preliminary safety and pharmacokinetics report.

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Background: RPS local recurrence after radical surgery (SX) is frequent and a major cause of death. Locally delivered CHT by a biocompatible and biodegradable implant matrix (CEB-01) loaded with SN-38 and placed in the surgical bed during SX may increase local control and survival in RPS patients with reduced systemic toxicity. **Methods:** This is a multicentre, open label, first-in-human phase 1 trial comprising a dose-escalation phase (3 cohorts with total SN-38 doses of 9, 18 and 36 mg respectively), followed by an expansion cohort at the recommended phase 2 dose (RP2D). Recurrent or locally advanced RPS patients candidates for local surgery, with no option of systemic treatment, ECOG < 2, life expectancy $>$ 6 months, and normal organ function are eligible. Primary objective is to determine RP2D, defined as the dose level at which less than 33% of patients present dose limiting toxicity (DLT) in a minimum of 6 at-risk patients during the first two weeks after SX. DLT is defined as any Grade ≥ 3 toxicity. Secondary objectives include safety, time to recurrence, biomarkers, pharmacokinetics (PK) and quality of life (QoL). Here we report preliminary safety, efficacy, and PK data for the initial patients enrolled. **Results:** First cohort of 9 mg SN-38 was completed in february 2021, with the inclusion of three patients with dedifferentiated liposarcoma, (grade 2-3) Patients were male, age 65 to 74, with ECOG of 0-1. Optimal SX were performed for recurrent/metastatic disease (2 patients) or locally advanced disease (1 patient) with complete (R0) and optimal (R1) outcomes. There were no surgical complications attributed to the SN-38 treatment. One patient suffered from grade 2 (Dindo Clavien classification) intestinal subocclusion due to SX complication resolved with medical treatment at day 5. Frequency and severity of adverse events (AE) was low. All the patients presented transitory abdominal discomfort and seroma. AEs consisted of one catheter infection and one hypomagnesemia, both grade 3. Only one treatment related AE (TRAE) consisting of alopecia grade 1 was reported. There were no DLTs observed during the first administrations of CEB-01 (9 mg SN38). SN38 and its glucuronidated SN-38 systemic levels were low, reaching a peak (Cmax) of 0.60 and 3.3 ng/mL at 2 and 6 hours respectively, and were detectable 27 days after CEB-01 implantation in the surgical bed, at 0.1 and 0.6 ng/mL respectively. **Conclusions:** CEB-01 biocompatible and resorbable implant matrix loaded with SN38 has proven to be safe upon first human administrations in RPS patients, with scarce low grade AEs and TRAE. Preliminary PK indicates low, prolonged, systemic SN-38 exposure as expected. Currently the second cohort of this trial is open for recruitment. Clinical trial information: NCT04619056. Research Sponsor: CEBIOTEX.