RESULTS

For the first dog, the duration of both procedures (umbilical hernia repair and removal of the cryptorchid testicle) was 22 minutes and the skin incision was 2.0 cm length. For the second dog, procedure duration and skin incision length were 18 minutes and 2.5 cm, respectively. During the post-operative period no lesions, haemorrhages, signs of pain or other surgical complications were observed.

CONCLUSIONS

The cryptorchidectomy performed by LESS through the commercial device is a feasible, safe and effective approach in dogs. The first case presented the ideal indication for the single port use, using the same incision for both procedures. LESS presents itself as an alternative to conventional laparoscopy in dogs with the additional advantage of only one incision, providing easy and secure organ retrieval.

A report of 2 cases of sialoceles in the cat

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The history, physical examination findings, laboratory test results, treatment, follow up and outcome of 2 cats with

sialoceles were reported. Both cats were admitted with a painless fluctuant cervical swelling and in one cat a sublingual sialocele was also present. Needle aspiration of the swellings showed a viscid fluid and cytology of the aspirates was consistent with the presence of saliva. A diagnosis of sialocele was made. Both cats were treated by sialadenectomy of the mandibular and sublingual gland complex. In case 2 marsupialization of the sublingual sialocele was also done. The histopathological examination of the excised tissues in one cat was compatible with chronic inflammation of the mandibular and sublingual gland. Both cats are in good health after a mean follow up time of 13 months.

Removal of the mandibular and sublingual salivary gland complex along with marsupialization of the ranula provided a successful outcome and no relapses were detected.

Development of canine adipose stem cell lines for the allogeneic treatment of osteoarticular diseases

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MATERIAL AND METHODS

After isolation from 2–10g of tissue, the canine adipose stem cells (cASCs) were selected according to their plastic adhesion properties and then cultured in flasks at 37°C and 5% CO₂. The adherent cells were then expanded for further functional and phenotypic characterization. The phenotypic characterization was performed by flow cytometry using monoclonal antibodies and the functional characterization was performed by adipogenic, osteogenic and chondrogenic differentiation assays.

RESULTS

This study demonstrates that our *in vitro* expansion protocol provided a high yield of expansion being useful for subsequent clinical trials. Moreover, the phenotypic characterization showed a high purity of the cell population after 3–4 passages. The markers expression profile was the typical for MSCs. Finally, the functional characterization showed an adequate ability of differentiation into different cellular lineages. All these results suggest that the cell lines obtained using our expansion protocol are suitable and appropriate for both experimental and clinical purposes.

CONCLUSIONS

These well-characterized cASCs constitute a potential therapeutic tool for the development of new strategies concerning the application of stem cell therapy in osteoarticular affections in the dog, and they will be applied initially in osteoarthritic patients, as the immuno-privileged and immuno-regulatory capabilities of MSCs enhance their therapeutic potential not only in autologous but also allogeneic recipients.

INTRODUCTION

In the recent years, stem cells have shown a great potential for the development of new and promising therapeutic strategies. Concretely, mesenchymal stem cells have an important therapeutic application in the treatment of numerous diseases. In clinical veterinary medicine, stem cells are most commonly used in therapeutic applications for the treatment of musculoskeletal injuries in horses and dog, specially tendonitis and osteoarthritis. In osteoarthritis, stem cell therapy offers a promising therapeutic option, since although current methods for articular cartilage defects are promising no treatment has resulted in complete restoration of the hyaline cartilage and the subchondral bone.

AIM

To isolate and characterize canine mesenchymal stem cells from the adipose tissue for their application in veterinary clinical settings.

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