Discussion : Inhibitory mechanism of PGE2 on MMPs and NGF involves the up-regulation of DUSP-1 resulting in the dephosphorylation of MAP kinases. Selective COX-2 inhibitors are useful for inflammatory pain, but they may have a limited efficacy for joint destruction and NGF-related pain because these drugs would attenuate the inhibitory action of PGE2 on MMPs and NGF expressions. DUSP-1 would be a novel target molecule for OA by regulating MAP kinases and following MMPs and NGF expressions.

P1-11.

Two cases in which nerve preservation was carried out by in situ preparation method for femoral liposarcoma and wrist squamous cell carcinoma

（社会人大学院博士課程 2 年形成外科学）
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【Introduction】For tumors existing close to important tissues such as neurovascular structures, by using in situ preparation method（ISP method）, safe margins can be secured without unnecessary sacrifice of neurovascular structures, if there is no risk of seeding of tumor cells during surgery. Furthermore, it is possible to prevent residual tumor cells by subjecting the remaining neurovascular structures to alcohol treatment.

【Methods】ISP method is performed according to 5 steps. Step 1 is that the tumor is excised en bloc, including the tumor and nerve/vessels, maintaining an adequate wide margin. However, the continuity of nerve/vessels is preserved. Step 2 is that the tissue mass is then isolated from the surgical bed using a sheet. Step 3 is that it is separated to release the nerve/vessels from the tumor. Step 4 is that If the invasion of the tumor reaches the perineurium or the adventitia of the blood vessel, soaking the nerve/vessels in pure alcohol. Step 5 is that If the nerve/vessels completely adhere to the tumor, they are sacrificed.

【Results】ISP method was used for 2 cases（myxofibrosarcoma, squamous cell carcinoma）, local recurrence was not observed for 1 year and half a year, and the affected limb function could be preserved.

【Discussion】ISP method can be compensation for deficitis in preoperative diagnosis and surgical technique is easy and special equipment is unnecessary. But there is restriction for a high malignant tissue type and extravascular invasion types. Therefore, adaptation of ISP method should be used with cation.

P1-12.

Role of DUSP1 on the regulation of NGF and MMPs in human intervertebral disc cells

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Background : Nonphysiological nerve invasion into degenerated intervertebral disc（IVD）due to aging or inflammation is considered as a molecular mechanism of discogenic low back pain. Matrix metalloproteinases（MMPs）and nerve growth factor（NGF）play important role for IVD degeneration and nerve invasion, respectively. We reported that steroid and PGE 1/2 suppress NGF and MMPs by attenuating the phosphorylation of mitogen-activated protein kinases（MAPKs）in inflammatory signaling and increasing the expression of dual-specificity phosphatase（DUSP）1（dephosphorylating enzyme of MAPKs）in human IVD cells. We investigated the effect of knocking down of DUSP1 gene on the regulation of NGF and MMPs in human IVD cells.

Methods : DUSP1 knocked-down cells were prepared by transfecting DUSP1 siRNA into IVD cells isolated from the tissue obtained during lumbar surgery. The cells were stimulated with the proinflammatory cytokine interleukin-1（IL-1）. The phosphorylation of MAPKs was sequentially evaluated by Western blotting. The target gene expressions were examined by real-time PCR and the proteins of those were examined by Western blotting.