Background and Aims Tendon-derived stem cells (TDSCs) in tendons are responsible for tenogenesis and tendon regeneration. Aberrant non-tenogenic differentiation of TDSCs, such as chondrogenic metaplasia, have been suggested as a pathogenesis of tendinopathy. Additionally, pain mediators, such as substance P, calcitonin gene-related peptide (CGRP) and macrophage migration inhibitory factor (MIF), have been increasingly discussed as an important factor in the pathogenesis of tendinopathy. The purpose was to evaluate whether the pain mediator affects differentiation of TDSC.

Methods TDSC was isolated and cultured from the Achilles tendon of SD rats. TDSC were treated with recombinant MIF, recombinant Substance P or recombinant CGRP. For gene knockdown, TDSC were transfected with MIF small interfering RNA (siRNA), Substance P siRNA, or CGRP siRNA. The TDSC culture mediums were prepared for RT-PCR. Expression of tenogenic genes (SCX, Egr1, Tnmd, Col type 1) and chondrogenic genes (BMP2, aggrecan, Sox9) of TDSC were compared with control group.

Results Treatment of recombinant pain mediators (MIF, Substance P or CGRP) in TDSC showed down-regulated tenogenic genes expression (figure 1A, 2A, 3A) and up-regulated chondrogenic genes expression (figure 1B, 2B, 3B) compared with control (p<.05). Knockdown of pain mediator genes (MIF, Substance P or CGRP) in TDSC showed down-regulated chondrogenic gene expression (figure 1B, 2B, 3B) while expression was up-regulated in a few tenogenic gene (Col type 1 with MIF and SCX with Substance P).

Conclusions Pain mediators, such as Substance P, CGRP and MIF, appear to be associated with pathogenesis of tendinopathy via enhance the aberrant chondrogenic differentiation and suppression of tenogenic differentiation of TDSC.

[18-100-D3-N] Protocol Approval of Animal Study Plan
Methods In a controlled-blinded study, patients more than 18 years old scheduled for primary THA under general anesthesia were randomized in two groups: PENG Block group (PG) with 2 mg.kg\(^{-1}\) Ropivacaine in 40 ml of saline. Placebo group (SG) who received only saline. Postoperative analgesia with: paracetamol 1g/6H, piroxicam 20 mg and Morphine PCA. The main endpoint was total morphine consumption for 24 hours. Secondary endpoints were: Fentanyl consumption, Pain scores (NRS) at rest and on movement and sitting position.

Results Sixty patients were included. The two groups were comparables. Fentanyl dose was equal in both groups: 345±106 \(\mu\)g in SG vs. 357±65 \(\mu\)g in PG. Morphine consumption was similar in both groups: 8.5±5.8 mg in SG vs. 9.6 ± 8.2 mg in PG. Time to first request was 1.0±0.6 h for patients in SG vs. 2.0±2.0 h in PG. Pain scores were also not different. Pain free sitting position noted in 50% of patient two groups.

Conclusions PENG block may improve the quality of recovery and reduce opioid requirements. However, our study did not show a significant impact of PENG block on intra and post-operative pain control in total hip arthroplasty.

ePoster session 5 – Station 2

**EP151** DEVELOPMENT OF AN AUTOMATED CHRONIC PAIN REGISTRY CAPTURING OUTPATIENT TREATMENTS AND PATIENT- REPORTED OUTCOMES

1, 2, 3Alexandra Sideris*, 4Justas Lauzadis, 5Vinicius Antao, 6Jennifer Cheng, 7Ellen Casey, 8Joel Press, 9Daniel Richman, 10Semih Gungor. 1Department of Anesthesiology, Critical Care and Pain Management, Hospital for Special Surgery, New York, USA; 2Department of Anesthesiology, Weill Cornell Medicine, New York, USA; 3HSS Research Institute, Hospital for Special Surgery, New York, USA; 4Center for the Advancement of Value in Musculoskeletal Care, Hospital for Special Surgery, New York, USA; 5Department of Physiatry, Hospital for Special Surgery, New York, USA; 6Department of Rehabilitation Medicine, Weill Cornell Medical College, New York, USA; 7Department of Rehabilitation Medicine, Weill Cornell Medicine, New York, USA; 8Department of Anesthesiology, Weill Cornell Medical College, New York, USA

10.1136/rapm-2023-ESRA.212

Background and Aims A variety of treatments are utilized in outpatient settings to manage chronic pain. Evidence for long-term treatment effectiveness is lacking, particularly for rare conditions such as complex regional pain syndrome (CRPS). There is limited patient- and encounter-level data from outpatient pain clinics to guide practice and spur innovation. The goal of this project was to create an automated, standard of care analytical registry embedded within a single institution’s electronic health record system that can be used as a clinical and research tool.

Methods After IRB approval, logic functions were programmed within the electronic health record (Epic) to automatically identify new patients who meet inclusion criteria of having a spine-related or neuropathic pain condition. For every registry patient, the database is being programmed to save key metrics and outcomes over 2 years (figure 1).

Conclusions This registry represents a proof-of-concept, automated data repository collecting key metrics and longitudinal outcomes from patients being treated for chronic, subacute and acute pain across affiliated outpatient clinics. It will serve as a data-driven tool to facilitate dialogue between providers and patients, promote quality assurance, and enable research and innovation in pain management.

Gungor_2021-0076_Outpatient_Pain_Registry_CR_approved_2022-2023