Opiate Free Management Of Day-Surgical Anterior Cruciate Ligament Reconstruction (ACLR) An Almost 4-Year Experience After An Initial Randomized Control Trial In A Combines Military Hospital

Background
Prescription drug related dependence is on the rise. Recently CDC reported 100,000 drug-related fatalities April 2020 -2021, 30% rise with more than three-quarters attributed to opioid use.
ACLR in USA and Europe is among the most common sports medicine procedures with increasing numbers every year. The expectation of pain is high as it is a day surgery procedure, involving autologous tendon harvest & subsequent fixation via tunnels in tibia and femur. This has led to prescription of opioid based analgesia in post-operative period to ensure pain control and discharge of patent the same day .
We adopted measures , helped avoided take home opioids altogether with marked reduction in opioids in recovery room with good patient satisfaction

Objectives
Through a Randomized control trial from March 2019 to March 2021 established clinical practice and protocol to establish Opiate Free ACLR.

Study Design & Methods
Randomized control trial , total of 300 patients, all men, Uniformed Military 197, and Civilians103. Age 19-38 years
Inclusion criterion was strict Isolated ACL primary rupture. BMI over 33, heavy smokers, un-controlled diabetes, intraoperative need to repair meniscus were excluded.
4 Exclusions .Informed consent to the patients and randomly allocated a sealed envelope describing the method to be opened in Operating roo .We divided them into two groups **Group A** "received preoperative 1 gram Tranexamic acid Intravenous (regardless of exact weight) + a combined lidocaine and Bupivacaine solution mixed in normal saline at graft harvest site + repeat of 1 gram Tranexamic acid Intravenous , just 10-15 minutes before deflation of torniquet. **Group B**. No Tranexamic acid but received a combined lidocaine and Bupivacaine solution mixed in normal saline at graft harvest site. Both Groups had 148 patients each.
All surgeries by same one surgeon, same surgical, recovery room and rehabilitation protocols anatomic Hamstring single bundle quadruples graft.
In immediate post-operative period nursing staff in day unit assessed the analgesia requirement based upon Visual Analog Score (VAS), unaware/blinded of the study protocol They were free to use a given combination of analgesia (oral & injectable Diclofenac, Paracetamol, Tramadol)
All received Oral NSAID and Oral Paracetamol as take-home medication.
Patients were followed in the outpatient department 10-12 days /6 weeks / 3-6-12 months with results recorded on **a pro-forma.** The regression analysis was performed. A multivariable negative binomial regression and Poisson regression mode. T-test and Chi-Square test

Results
Pain. VAS sore Group A: Median3 ,STD 1.101 . Group B : Median 6, STD 1.00682. P <0.00073. **Use of opiate analgesia in Day surgery unit :** Chi-Square Test. Variables that had Opiates or combination analgesia were statistically significantly less in Group A (Asymp. Sig= Asymptomatic significance) < 0.004.**Bruising (Harm sore)** Group A**=** Median 0.28 STD 0.494 Group B= Median 2, STD 1.0363 P< 0.005 **Effusion (stroke test)** Group A = Median 1 & STD 0.500 Group B = Median 1 & STD 0.223.P < 0.0005 . **Range of Motion** : at 10-14 days and six analysed using Chi-Square Test the difference between the Group A and B had significance P-Value

<0.001.**Complications** : No patient had any DVT over the study period and to date.

Conclusions

Decrease use of opiates in immediate post operative and complete obliteration can be made possible by using simple regimens. From 2019 we did not provide Opiate based analgesia to take home without nay dissatisfaction from the patients or complications from Tranexamic acid.