EP203 IS PROPHYLACTIC INTRAOPERATIVE TRANSFUSION NEEDED IN UNILATERAL TOTAL KNEE ARTHROPLASTY? COMPARISON OF HEMATOLOGIC DATA AND POSTOPERATIVE TRANSFUSION RATE BETWEEN PROPHYLACTIC ALLOGENIC AND AUTOLOGOUS TRANSFUSION GROUP WITH NO TRANSFUSION GROUP

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Background and Aims This study aimed to compare the effectiveness and safety of different blood management strategies in patients undergoing total knee arthroplasty (TKA). The study compared the use of prophylactic allogeneic blood transfusion, autologous transfusion, and intra-articular tranexamic acid administration with a control group that did not receive any prophylactic intervention.

Methods This retrospective cohort study enrolled 711 patients who underwent unilateral total knee arthroplasty and were divided into four groups: the allogeneic transfusion group (group AL), the autologous transfusion group (group AT), the tranexamic acid group (group TA), and the control group (group C). The primary outcome measured was the rate of postoperative allogeneic blood transfusions. Secondary outcomes included postoperative hemoglobin and hematocrit levels, postoperative bleeding amount, and the incidence of hypotension.

Results The groups AT and AL did not exhibit a significant reduction in postoperative allogenic blood transfusion rates compared to group C (28/108, p=0.21 and 37/159, p=0.78, respectively). However, group TA demonstrated a significantly lower rate of postoperative allogenic blood transfusions compared to group C (22/125 vs 3/125; P = 0.0001). The postoperative hemoglobin and hematocrit levels were statistically lower in group TA than in group C, but the levels in groups AT and AL did not differ significantly from those of group C.

Abstract EP203 Table 1 Postoperative transfusion

Table 2. Postoperative transfusion.

Postoperative transfusion	Group C (n= 159)	Group AL (n= 159)	P value	Group C (n= 108)	Group AT (n= 108)	P value	Group C (n= 125)	Group TA (n= 125)	P value
Yes/no (%)	37/159 (23.3)	35/159 (22.0)	0.78	28/108 (18.5)	20/108 (18.5)	0.21	22/125 (17.6)	3/125 (2.4)	0.0001*

Group AL: allogeneic group; Group AT: autologous group; Group TA: tranexamic acid group ; Group C: control group. * means P value is less than 0.05.

Abstract EP203 Table 2 Postoperative hemoglobin & Table 3. Postoperative hematocrit

Table 3. Postoperative hemoglobin

	Group C (n= 159)	Group AL (n= 159)	P value	Group C (n= 108)	Group AT (n= 108)	P value	Group C (n= 125)	Group TA (n= 125)	P value
POD 0	10.98±0.09	11.55±0.09	-	10.8±0.11	10.57±0.11	0.26	11.2±0.11	11.53±0.11	0.02*
POD 1	10.38±0.09	10.94±0.09	-	10.17±0.11	10.1±0.11	>.9999	10.55±0.11	11.13±0.11	<.0001*
POD 2	9.19±0.09	9.68±0.09	-	9.03±0.11	9.33±0.11	0.06	9.37±0.11	10.2±0.11	<.0001*
POD 3	8.86±0.09	9.44±0.09	-	8.74±0.11	9.16±0.11	0.0028*	9.05±0.11	9.67±0.11	<.0001*

Group AL: allogeneic group; Group AT: autologous group; Group TA: tranexamic acid group ; Group C: control group; POD: postoperative day. Numbers are mean and standard deviations. * means P value is less than 0.05.

Between Group C and Group AL, P value is 0.93 in linear mixed model, so we did not run the post-hoc analysis.

Table 4. Postoperative hematocrit

	Group C (n= 159)	Group AL (n= 159)	P value	Group C (n= 108)	Group AT (n= 108)	P value	Group C (n= 125)	Group TA (n= 125)	P value
POD 0	33.07±0.27	34.36±0.27	-	32.58±0.31	31.54±0.31	0.0156*	33.71±0.31	34.38±0.31	0.22
POD 1	31.25±0.27	32.64±0.27	-	30.66±0.31	30.24±0.31	0.93	31.76±0.31	33.05±0.31	0.0008*
POD 2	27.71±0.27	29.02±0.27	-	27.25±0.31	28.01±0.31	0.14	28.24±0.31	30.43±0.31	<.0001*
POD 3	26.82±0.27	28.44±0.27	-	26.46±0.31	27.79±0.31	0.0012*	27.38±0.31	28.98±0.31	<.0001*

Group AL: allogeneic group; Group AT: autologous group; Group TA: tranexamic acid group ; Group C: control group; POD: postoperative day.
Numbers are mean and standard deviations. * means P value is less than 0.05.
Between Group C and Group AL, P value is 0.87 in linear mixed model, so we did not run the post-hoc analysis.

Abstract EP203 Table 5 Postoperative blood loss

Table 5. Postoperative blood loss

	Group C (n= 159)	Group AL (n= 159)	P value	Group C (n= 108)	Group AT (n= 108)	P value	Group C (n= 125)	Group TA (n= 125)	P value
0–24 hour (mL)	249.62±14.35	340.88±14.35	<.0001*	239.86±16.4	375.23±16.4		247.2±13.74	145±13.74	<.0001*
24–48 hour (mL)	118.11±14.35	262.82±14.35	<.0001*	118.56±16.4	290.21±16.4		116.88±13.74	219.4±13.74	<.0001*

Group AL: allogeneic group; Group AT: autologous group; Group TA: tranexamic acid group ; Group C: control group. Numbers are mean and standard deviations.
* means P value is less than 0.05.

Conclusions Our study indicates that intraoperative prophylactic transfusion did not result in a reduction in the postoperative transfusion rate when compared to the control group in patients undergoing total knee arthroplasty. However, the group receiving tranexamic acid showed lower transfusion rates and higher levels of hemoglobin and hematocrit.

IRB approval

EP204 A PROSPECTIVE DOUBLE-BLINDED RANDOMIZED CONTROL TRIAL COMPARING ERECTOR SPINAE PLANE BLOCK TO SPINAL ANALGESIA FOR POSTOPERATIVE PAIN IN LUNG HYDATID CYST PEADIATRIC SURGERY

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Background and Aims Lung hydatid cyst surgery causes considerable postoperative pain, and it can lead to postoperative pulmonary problems particularly in children . The erector spinae plane (ESP) block is a recently described , is simple to perform, and numerous studies have established the analgesic efficacy of ESP block in a variety of therapeutic settings. To compare the analgesic efficacies of erector spinae plane (ESP) block and spinal analgesia (SA) in lung hydatid cyct (LHC) of peadiatric surgery

Methods eighty patients undergoing LHC, divided into two groups: group SA (had morphine spinal analgesia at a dose 3 micogramme/kg) and group ESP (patients had an ultrasound-guided ESP block at the end of surgery with 0.3 ml/kg Ropivacaine). The primary outcome was to compare pain scores at rest 24 h postoperatively between the 2 groups. Secondary outcomes included post operative FLACC scores for 48 h, procedural time, use of rescue medication, adverse events, and parental satisfaction

Results Patients with ESP block had a better FLACC score than those with SA but no statistical difference at a specific time. Cumulative Paracetamol consumption was higher in the ESP block group (p=0.047). The incidence of overall adverse events in the SA group was higher than in the ESP block group (p=0.045).

Conclusions Erector spinae plane block may be inferior to SA for analgesia following LHC, but it could have tolerable analgesia and a better side effect profile than SA. Therefore, it could be an alternative to SA or thoracic epidural analgesia as a component of multimodal analgesia in children population.