

(510006)

SuValue® 2016 1 1 2020 12 31

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858

 $P > 0.05$ $P < 0.01$

Effectiveness of haemocoagulase agkistrodon *versus* tranexamic acid and sodium chloride in the prevention and treatment of perioperative bleeding: a real-world study

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Abstract Objective To compare the effectiveness of haemocoagulase agkistrodon and tranexamic acid and sodium chloride in the prevention and treatment of perioperative bleeding in a real world setting. **Methods** A research database was constructed based on the records of inpatient visits using haemocoagulase agkistrodon and tranexamic acid and sodium chloride according to the SuValue® database from January 1, 2016 to December 31, 2020. The patients were divided into two groups according to the different interventions. After matching with a 1:1 propensity score, the effectiveness of two groups was compared. **Results** A total of 858 patients were included in each of the two groups, and there was no statistically significant difference in baseline characteristics between the two groups ($P > 0.05$). Research results showed that patients using haemocoagulase agkistrodon had significantly reduced length of hospital stay, decrease in hematocrit, average estimated surgical bleeding, and decrease in hemoglobin ($P < 0.01$). **Conclusion** Haemocoagulase agkistrodon has better effectiveness than tranexamic acid and sodium chloride for reducing perioperative blood loss based on current real world evidence.

Key words Real world study; Propensity score matching; Haemocoagulase agkistrodon; Tranexamic acid and sodium chloride; Perioperative bleeding; Effectiveness

[1]

[3-4]

[2]

[5-6]



1

1.1

220 46 140

34

2016 1 1 2020 12 31

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		<i>n</i> =858		<i>n</i> =858		<i>t</i> / <i>χ</i> ²	<i>P</i>	
	%	48.90±14.89		48.77±17.36		0.49	0.689	
		563 65.62		563 65.62		0	1.000	
		295 34.38		295 34.38				
		%	604 70.40		624 72.73		1.03	0.309
			254 29.60		234 27.27			
%	0 0.00)		0 0.00		1.24	0.265		
	4 0.47		9 1.05					
	854 99.53		849 98.95					
PT		11.41±1.41		11.42±2.16		−1.41	0.079	
APTT		28.93±6.08		28.92±5.07		1.10	0.136	
TT		17.70±1.97		17.61±1.92		2.26	0.988	
FIB g/L		3.00±1.01		3.04±1.01		−0.005	0.502	
PT		APTT				TT		
	FIB							

 $k_2=0.033\ 08\ k_3=0.183\ 3$

1.3

R 3.5.3

propensity score matching

PSM

4

[8]

Wilcoxon

 $t\ P<0.05$

2

2.1

1.2

30

HIV

[11-15]

[16]

51 549

16 387

35 182

1 859

3 781

1 1

858

hematocrit Hct

hemoglobin

HB [17]

estimated total blood

loss eTBL eTBL

patient blood

1

volume PBV Hct

[18] eTBL=PBV× Hct_{pre}

4

 $Hct_{post} / Hct_{pre} + Hct_{post} \times 2$ Hct_{pre} $P>0.05$ Hct Hct_{post}

2.3

 $Hct\ PBV=k_1 \times Hct_{post}^3 + k_2 \times Hct_{post} + k_3\ k_1=$ 0.366 9 $k_2=0.032\ 19\ k_3=0.604\ 1$ $k_1=0.356\ 1$

Hct

HB

eTBL



$P < 0.01$

2

3

Hct	HB
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eTBL

HB

1g/dL

3.7 [19]

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[20-21]

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t-PA u-PA

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[27]

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X FXa

[13,29]

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