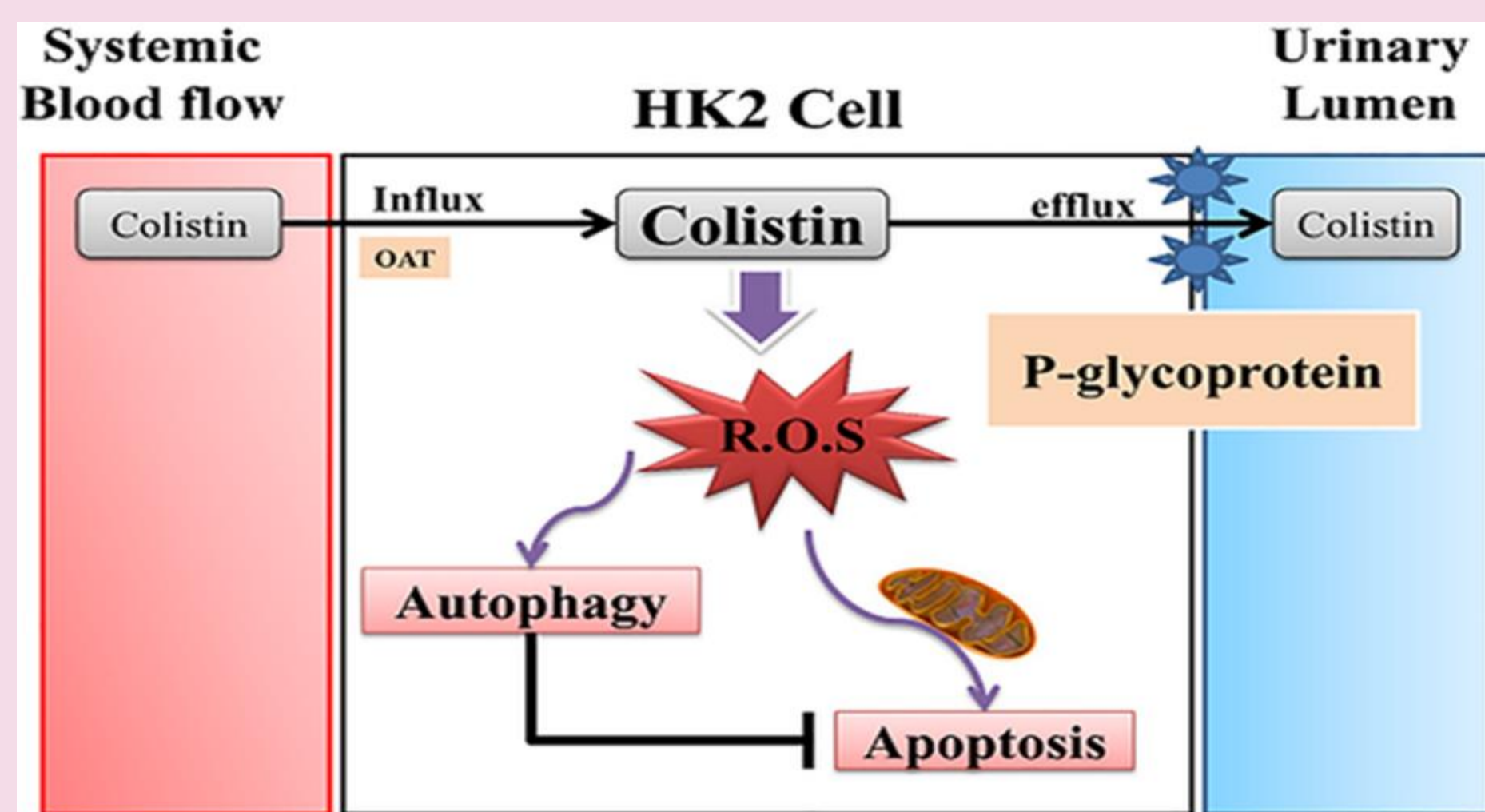


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**Introduction:** Colistin (COL) has become the backbone of the treatment of infections due to extensively drug-resistant (XDR) Gram-negative bacteria. The most common restriction to its use is acute kidney injury (AKI). Colistin is an antibiotic that was introduced many years ago and was withdrawn because of its nephrotoxicity. Nowadays, reemergence of this antibiotic for multi-drug resistant Gram-negative infections, and a new high dosing regimen recommendation increases concern about its nephrotoxicity. Studies reported that approximately one third of colistin used patients have developed nephrotoxicity. In experimental studies, when nephrotoxicity caused by colistin is reduced by oxidative release and use of antioxidants. However, the risk is increased with the presence of a different risks, such as age, hypertension, use of contrast media, and the use of other nephrotoxic drugs.



Picture 1 Show the pathophysiological mechanisms of the colistin in nephrons

**Methods:** We reached data by using our Bezmialem Vakıf University patients data system called 'Bizmed' retrospectively (July 2020 - June 2021). When we were arranging our patients groups, we took care of exclusion and inclusion criteria. We didn't include patients that have chronic renal disease. In addition to above-mentioned exclusion criteria, we also determined inclusion criteria such as: Patients should be over 18 years old and admitted to anesthesia and reanimation ICU. Also they should take at least 48 hours IV colistin. Colistin treatments received ones. "Patients with no pre-existing kidney dysfunction were compared in terms of risk factors (age, hypertension, use of contrast media, and the use of other nephrotoxic drugs) and outcomes of AKI graded according to the KDIGO criteria

	Serum creatinine			Urine output
	RIFLE	AKIN	KDIGO	
Definition	SCr increase $\geq$ 50% within 7 days	SCr increase $\geq$ 50% or $\geq$ 0.3 mg/dL within 48 h	SCr increase $\geq$ 0.3 mg/dL within 48 h or $\geq$ 50% within 7 days	UO < 0.5 mL/kg/h for 6 h
Staging	RIFLE	AKIN	KDIGO	
RIFLE-Risk	SCr increase $\geq$ 50% or GFR decrease > 25%	SCr increase $\geq$ 50% or $\geq$ 0.3 mg/dL	SCr increase $\geq$ 0.3 mg/dL within 48 h or $\geq$ 50% within 7 days	UO < 0.5 mL/kg/h for 6 h
AKIN stage 1				
KDIGO stage 1				
RIFLE-Injury	SCr increase $\geq$ 100% or GFR decrease > 50%	SCr increase $\geq$ 100%	SCr increase $\geq$ 100%	UO < 0.5 mL/kg/h for 12 h
AKIN stage 2				
RIFLE stage 2				
RIFLE-Failure	SCr increase $\geq$ 200% or GFR decrease > 75%	SCr increase $\geq$ 200% or SCr $\geq$ 4 mg/dL (with an acute rise $\geq$ 0.5 mg/dL)	SCr increase $\geq$ 200% or SCr $\geq$ 4 mg/dL or need RRT	UO < 0.3 mL/kg/h for 24 h or anuria for 12 h
AKIN stage 3				
KDIGO stage 3				
RIFLE-Loss	Need RRT for > 4 weeks			
RIFLE-End stage	Need RRT for > 3 months			

Abbreviation: RIFLE, risk of renal failure, injury to the kidney, failure of kidney function, loss of kidney function, and end-stage renal failure; AKIN, Acute Kidney Injury Network; KDIGO, Kidney Disease Improving Global Outcome; SCr, serum creatinine; UO, urine output; GFR, glomerular filtration rate; RRT, renal replacement therapy.

Picture 2: show rating AKI according to different parameters (urine output, creatine, GFR)

Inclusion criteria	Exclusion criteria
Patients over 18 years old admitted to anesthesia and reanimation ICU	Those with a prior history of Renal disease history
At least 48 hours IV Colistin treatments received ones	Pregnant women
	Patients Hospitalized with Acute Hypotensive Shock

Table 1 Show which groups are covered by our study

**Results:** 6 out of 14 patients developed colistin nephrotoxicity. The average age of the patient group was %56.5. New onset AKI developed in 42.8% of the patients. Patients who developed nephrotoxicity, the rate of sepsis was % 33.3, while in those who do not developed it, it was % 25. We didn't reach the targeted patient number on the ethical form. Statistical analysis could not be performed.

**Conclusion:** COL-induced nephrotoxicity occurred significantly more often in patients older than 60y of age and was related to low initial GFR estimations and high CCI scores, which were basically determined by age.

B1 BOBREK YETMEZLİĞİ GELİŞEN (EVET:1, HAYIR:0)												
	A	B	C	D	E	F	G	H	I	J	K	L
	BOBREK YETMEZLİĞİ GELİŞEN (ÖLÜM (VA COMORBİDİTES)											
1	ID NUMBER	GENDE R	AGE	DIABETES	HYPERTENSION	COPD	NEOPLASIA	HEART FAILURE	COROARTERIAL DISEASE	NEUROLOGICAL DISEASE		
2	32734155954	0,0	50	1	0	0	0	0	0	0	0	0
3	13045747522	1,0	20	0	0	0	0	0	0	0	0	0
4	25549939208	0,0	69	1	0	0	0	1	0	0	0	1
5	18722251266	1,0	57	1	1	0	0	0	0	0	0	0
6	16916347412	1,0	83	1	0	0	0	1	0	0	0	0
7	26102004982	1,0	68	1	0	0	0	1	0	0	0	0
8	18941230660	0,0	85	0	0	0	0	0	0	0	0	0
9	34081320764	0,0	31	0	0	0	0	0	0	0	0	1
10	43816425834	0,0	63	0	0	0	1	0	1	1	0	0
11	35105005278	1,0	76	1	0	0	1	0	1	0	0	0
12	29311561536	0,0	46	0	0	0	0	0	0	0	0	0
13	34876358408	0,0	38	1	0	0	0	0	0	0	0	0
14	32791825524	0,0	62	1	0	0	0	1	0	0	0	0
15	61150418466	1,0	43	0	0	0	0	0	0	0	0	0

Table 2 Show which patient developed AKI during antibiotic regimes receiving

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