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Abstract (poster session)

Daptopmycin, elevated creatine phosphokinase and rhabdomyolysis - is there a co-relation? Clinical experience from the UK EU-CORE^SM registry, 2006-2011 (RP 1-4)

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Background: Baseline and regular monitoring of creatine phosphokinase[CPK] is standard requirement during Daptomycin [DAP] therapy. The rationale comes from early studies with DAP and association with rhabdomyolysis. Literature suggests CPK elevation in patients may be related to several other causes including surgical procedures, diabetes mellitus, statin use, etc. We present a review of 5-year data on elevations in creatine phosphokinase (CPK) levels during DAP use from the UK EU-CORE^SM database. Methods: Data were collected retrospectively from Jan 2006 - Jun 2011. The analysis included patients treated with daptomycin [DAP] with elevations in CK recorded either at baseline or during DAP therapy. Results: Since the beginning of the registry, 590 patients from 15 participating institutions in the UK were entered in to the database. Baseline CPK measurements were recorded for 193 patients (32.7%): of which 166 [%] were <1xupper limit of normal (ULN); 15 [%] >1 to 2xULN. 12 patients had CPK levels >2xULN prior to commencing DAP: 7 patients >2 to 5xULN; 2 patients >5 to 10xULN; 3 patients >10xULN. During DAP therapy CPK measurements were recorded for 218 patients. CPK: <1xULN for 179 patients. >1 to 2xULN for 22. CPK >2 to 5xULN during therapy was reported for 5 patients, >5xULN, 12 (Table). Of the 17 patients with elevated CPK, 10 had levels in excess of >2xULN at the start of DAP therapy. Day of highest CPK ranged from 1 to 32 days. CPK elevations or high CPK levels were reported as an adverse event (AE) for 9 patients and asymptomatic CPK elevation for 1 patient. An AE of myalgia was reported in 1 patient where CPK was recorded as >10xULN at start of DAP therapy. Rhabdomyolisis was reported as an AE for 2 patients: CPK was not recorded for 1 and the other CPK was <1xULM during DAP therapy. Conclusion: Of the patients reported with elevations in CPK in the registry, 10 had elevated CPK prior to DAP, suggesting that these elevations were related to other causes. Waddington et al report no muscular symptoms and progressive reduction from >113XULN to >1XULN during successful treatment with DAP. BNF suggests discontinuing DAP only if both unexplained muscular symptoms and markedly elevated CK co-occur

Patients with CPK recorded at >2xULN during DAP therapy (n=17)		
	>2 to 5xULN n=5 (%)	>5 xULN n=12 (%)
Age (Mean)	54.8	57.4
Male	5 (100)	9 (75)
Weight kg (Mean)	99.1	88.0
HMG-CoA reductase inhibitor	1 (20)	3 (25)
Prior Antibiotics	4 (80)	11 (92)
Concomitant antibiotics	3 (60)	7 (58)
Days of therapy (Mean)	19.4	11.2
Baseline CPK		
<1xULN	-	4 (33)
>2 to 5xULN	1 (20)	1 (8)
>5xULN	-	4 (33)
Not measured	4 (80)	3 (25)