

A Comparative Analysis of Major Clinical Outcomes Using Drug-Eluting Stents versus Bare Metal Stents in Male versus Female Patients.

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Background: Gender differences have not been addressed in the evaluation of drug eluting stents (DES). We aimed to check the safety and possible benefit of DES use in males versus females.

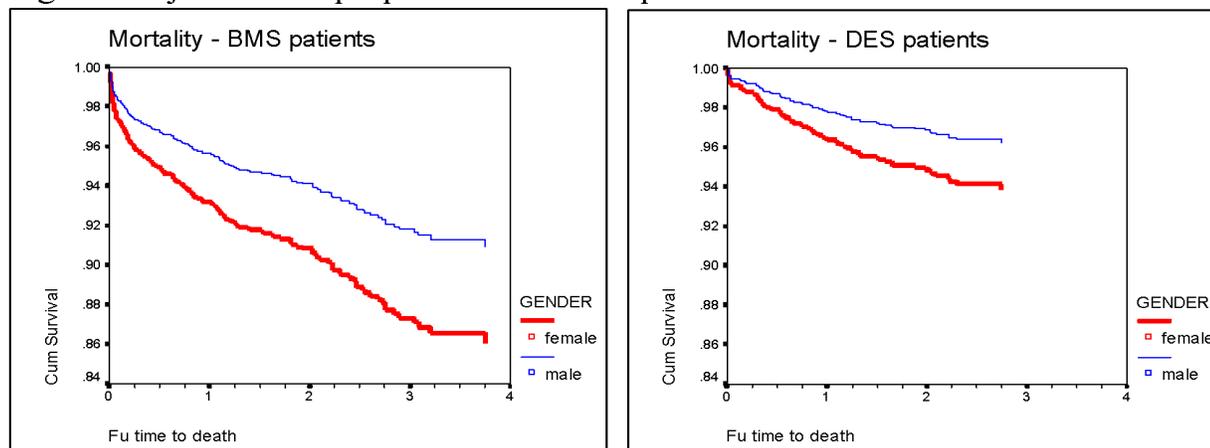
Methods: We compared risk-adjusted total mortality, myocardial infarction and event-free survival in a consecutive cohort of 4700 patients undergoing PCI at our institution between 1/4/2004 and 30/6/2007, of whom 3544 (75.4%) were male and 1156 (24.6%) were female. Follow up time was 9 months to 4 years (mean 2.44 years).

Results: Drug eluting stents were used in 42.0% of males vs. 42.6% of females (p=NS). Female patients were older, had more diabetes mellitus and hypertension, and were more likely to be treated for proximal main vessel disease. They had less 3 vessel disease and smoked less. The distribution of risk factors in males vs. females was equal in the DES and the BMS treated groups. Both males and females derived a significant benefit from use of DES vs. BMS (see table). Whereas female patients treated using BMS had a worse 4 year cumulative mortality compared to males (16.6% vs. 11.61% adjusted hazard ratio 1.58 CI-1.15-2.19; p=0.005), DES-treated patients had no gender-related mortality difference (9.47% vs. 7.39%; p=NS). This pattern was similar in other outcome measures.

Table: 4 year cumulative event rate

	males			females		
	BMS	DES	P value	BMS	DES	P value
Death	11.61%	7.39%	0.008	16.6%	9.47%	0.009
Death/MI	15.33%	9.25%	0.001	20.08%	13.27%	0.008

Figures: adjusted Cox proportional hazards plots



Conclusions: Both males and females benefit from DES use. The benefit of DES among females attenuates the gender difference in cardiac prognosis.