

The influence of preoperative MRI on the surgical management and outcome in patients with invasive lobular carcinoma

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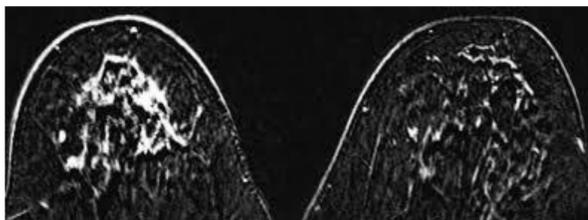
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Introduction

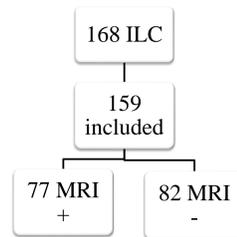
Since 2008 preoperative Magnetic Resonance Imaging (MRI) is recommended in the European Guidelines in the diagnostic work-up for invasive lobular carcinoma (ILC). It has shown to underestimate the size of the tumor less than mammography (MMG) and to detect additional ipsilateral carcinoma in 32% and contralateral carcinoma in 7%. We investigated the impact of preoperative MRI on surgical treatment and outcome in patients with a proven ILC by core biopsy.



Materials and methods

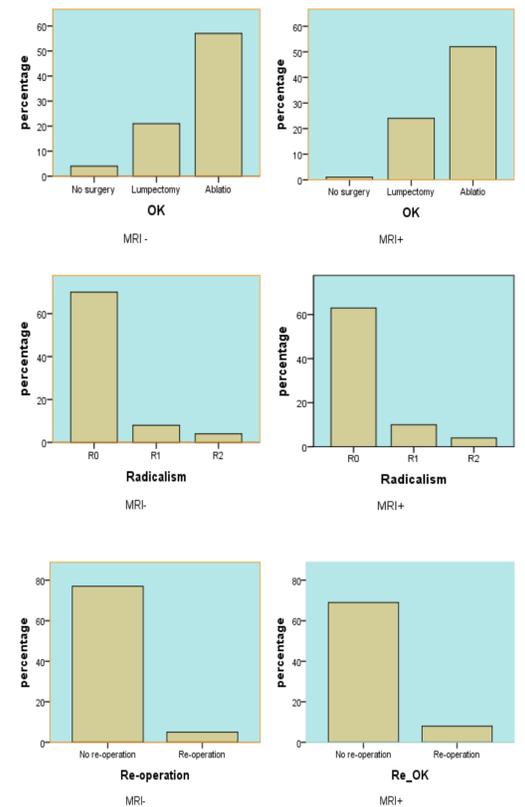
All women between January 2007 and November 2011 with a core biopsy proven ILC of the breast were included. Before introduction of the European Guidelines a pre-operative MRI was not performed, which made it possible to divide the women in two groups; one with and one without preoperative MRI. All patients underwent MMG and ultrasonography (US). Patients with a history of breast malignancy were excluded.

Results



There were no significant differences between the groups in patient characteristics, tumor characteristics, characteristics on MMG or US. An additional ipsilateral lesion was detected in 19 patients of MRI+ group. A contralateral lesion was detected in 3 patients. The size of the tumor was underestimated (significant) with MMG: 19 mm (mean, range 0–110) on MMG vs 32 mm on MRI (mean, range 7–87). Differences in surgical therapy were either not present or statistically significant between MRI+ and MRI– group: breast conserving therapy (24% vs 21%), radical surgery (67 vs 62%) and reoperation rate (33% vs 23%).

	MRI-	MRI+	P-value
Age	Mean 68	Mean 77	P=0,77
Side			P=0,57
• Left	41 (50%)	35 (45%)	
• Right	41 (50%)	42 (55%)	
Palpable			P=0,93
• Yes	57 (56%)	54 (57%)	
• No	25 (44%)	23 (43%)	
Mammography			
• Occult	6 (7%)	11 (14%)	P=0,16
• Mass	66(80%)	57 (74%)	P=0,33
• Architecture disturbance	56 (68%)	39 (51%)	P=0,02
• Calcification	9 (11%)	10 (13%)	P=0,70
• Size (mm)	Mean 19.41	Mean 19.05	P=0,18
Ultrasound			
• Shape			P=0,53
• Occult	7 (9%)	7 (9%)	
• Irregular	54 (66%)	44 (57%)	
• Lobulated	11 (13%)	17 (22%)	
• Oval	10 (12%)	9 (12%)	
• Echogenicity			P=0,005
• Dark	62 (76%)	69 (90%)	
• Inhomogeneous	13 (16%)	1 (1%)	
• Size (mm)	Mean 17.5	Mean 17	P=0,89
Hormonal therapy (1 missing value)	68(84%)	65(84%)	P=0,94
Chemotherapy (1 missing value)	28(35%)	44(57%)	P=0,004
Multifocal MRI	-	9 (12%)	
Multicentric MRI	-	10 (14%)	
Contralateral ILC MRI	1 (1%)	2 (3%)	



Conclusions

Preoperative MRI did not change the surgical management in our study population. In patients who were treated with breast conserving therapy, a preoperative MRI had no influence on the rate of irradiated surgery or reoperation rate, although it should be noted that our percentage breast conserving therapy was relatively low. Contralateral lesions were found in 2 patients (3%) on MRI and in 1 patient (1%) on mammography. In our study population, there was no additional value of MRI in a standardized protocol.

Literature cited

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