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BREAST CANCER IN PREGNANCY: A CASE SERIES IN MALAYSIA

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1 INTRODUCTION

The incidence of pregnancy associated breast cancer (PABC) is increasing in developing countries likely related to delayed child-bearing. It is challenging to manage as treatment is a balance in trying to achieve good oncological outcome without jeopardizing the foetus.

2 METHODOLOGY

This is a retrospective case series of all patients who were diagnosed to have breast cancer during pregnancy in a single tertiary institution in East Coast Malaysia between 2012 to 2023. Data on patient's demographics, tumour features, treatment pattern and patient's acceptance towards treatment were reviewed.

3 RESULTS

Baseline characteristics	N =10
Mean Age (95% CI)	32.6 28.6 – 36.7
Race Malay (%)	10 (100%)
Mean duration seeking treatment in months Range	6 1-12
Trimester First Second Third	0 8 2

Disease characteristics	N =10
Mean tumour size in cm (95% CI)	3.6 (2.1-5.0)
Nodal involvement Clinical Pathology (from HPE)	6/10 8/8
US hepatobiliary during pregnancy No metastases Not done	4 6
CT TAP post delivery Metastases No metastases	5 4
Immunohistochemistry HR positive and Her2 negative HR and Her2 positive HR negative and Her2 positive Triple negative	6 (60%) 3 (30%) 1 (10%) 0

No	Age	Gestation age	Gravida	Stage	Receptor status	Treatment (during pregnancy)	CT staging post delivery	Post partum treatment	Progression (Duration is after diagnosis)
1	32	14	G5P4	T2N1	ER negative PR negative Her2 positive	MAC(2nd trimester) Adjuvant FECX6	Lung metastases	Transtuzumab	32 months - Progression of disease, on 3rd line chemotherapy
2	39	12	G5P4	T2N1	ER positive PR positive Her2 negative	Advised for MAC but defaulted	Liver and bone metastases	Refused palliative chemotherapy	11 months – Died
3	21	21	G1P0	T2N1	ER positive PR positive Her2 positive	BCS and AC (2nd trimester) Refused adjuvant chemotherapy during pregnancy	No distant metastases	FECX6 RT Tamoxifen	Well up to 5 years follow up
4	33	12	G4P2+1	T3N1	ER negative PR positive Her2 positive	Refused neoadjuvant chemotherapy during pregnancy	Liver metastasis	NA FEC X6 MAC	36 months– progression of disease. Second line chemotherapy
5	28	28	G3P2	T2N1	ER positive PR positive Her2 negative	MAC and EL LSCS same setting at 33 weeks	No distant metastases	FECx3, Tx3	9 months- progression of disease then defaulted
6	36	14	G4P3	T3N1	ER positive PR positive Her2 negative	MAC (18 weeks) Refused adjuvant chemotherapy during pregnancy	Lung and bone metastases	FEC X 6	26 months – Died
7	32	22	G4P3	T2N1	ER negative PR positive Her2 negative	MAC and ELLSCS at 36 weeks	No distant metastases	FEC X 6 RT Tamoxifen	21 months - well
8	29	21	G5P2+2	T3N1	ER positive PR positive Her2 negative	NA FECX3 IOL SVD at 37 weeks	No distant metastases	NA TX3 MAC Tamoxifen	17 months – progression of disease 2nd line chemotherapy
9	40	31	G2P1	T3N1	ER positive PR positive Her2 negative	NA FECX2 Deliver at 36W	Bone metastases	NA FECX1 TX3 MAC	9 months – Awaiting RT and CDK4/6 inhibitor
10	36	30	G4P2+1	T1N0	ER positive PR positive Her2 positive				Loss to follow up

BCS=Breast conserving surgery; ER= Estrogen receptor; EL LSCS=Elective lower segment caesarean section; FEC=5-fluorouracil, epirubicin, cyclophosphamide
MAC=Mastectomy axillary clearance; NA=Neoadjuvant; PR=Progesteron receptor; RT=Radiotherapy; T= Taxotere

4 DISCUSSION

Majority of our patients (90%) are hormone positive compared to other publications which reported higher proportions of hormone receptor negative, HER2 enriched or triple negative patients.[1–5] Hormone receptor negative tumours in PABC conferred a worse prognosis consistent with nonpregnant breast cancer but inconsistent with explanation that high levels of estrogen and progesterone drive tumour progression.[1]

Most of our patients presented in advanced stage probably due to lack of awareness about breast cancer in young and also due to reduced sensitivity of self breast examination due to pregnancy related changes. There was a delay (mean of 6 months) from the time patient detected a breast lump to seeking treatment meaning a majority was already symptomatic before pregnancy.

Acceptance of treatment during pregnancy is difficult when there is probability of foetus being threatened, although risk is low. Half of our patients refused chemotherapy during pregnancy although chemotherapy is generally safe from second trimester onwards and they waited post delivery for definitive treatment and ending up with poorer prognosis.

5 CONCLUSION

Most of tumours in our series of PABC are hormone positive, either ER or PR positive .
Majority of our patients presented in advanced stage and refused to receive treatment antenatally, resulting in progression of disease.
Further studies are required to determine the factors that influence their decision regarding acceptance of treatment.

6 REFERENCES

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