



Breast cancer 'not a death sentence' More funding needed for research



BREAST cancer is the most common cancer in women worldwide and the principle cause of death from cancer among women globally. Many awareness programs were launched in Kuwait in the past week as October is the global Breast Cancer Awareness Month. In today's Insight, we talk to Dr Fahd Al-Mulla, the Director of the Research Core Facility (RCF) at Kuwait University, Health Sciences Center.

He is a Fellow of the Royal College of Physicians of Edinburgh. He gained his MB, ChB, PhD degrees from Glasgow, UK. After realizing the lack of infrastructure pertaining to the fields of genomics, proteomics and cellular biology in his home university, he established a state-of-the-art facility specialized in molecular technology. He heads a Molecular Pathology Unit, which aims at delivering state-of-the-art diagnostic, targeted/personalized therapy for cancer patients and molecular genetics.

In this interview, we look at various aspects of Breast Cancer - the incidence and causes, the preventative options, its social and psychological implications for women. Dr Al-Mulla also discusses the failings of the health sector in areas of research and audit. He also calls for more attention to be paid to the genetic factors of the disease.

Question: What is breast cancer?

Answer: Breast cancer arises from breast ductal or lobule cells that make milk. A cancer cell lacks control, its growth becomes uncontrolled and begins to move and spread. Breast cancer is a very complicated disease because it is a heterogeneous disease. It is not one disease. People think that breast cancer is the same in every woman. But this isn't so. It is a group of diseases, a group of breast cancer and a group of different types of breast cancer. This is why it is so complicated to understand and treat. We have to treat every individual differently. Breast cancer is a cancer that affects females mainly and some males as well. But mostly it is a female disease. That is what breast cancer is in a nutshell.

Q: What are the different types of breast cancer?

A: Breast tumors are mainly ones that are benign, which can be surgically removed and the other ones that are malignant. Malignant means it is a cancer. Even in cancer there are at least five different types and inside each type there are many different types. This is how complicated it is and until we understand the molecules that drive the cancer, we cannot understand how to treat it. We call this personalized medicine. We are proud in Kuwait to be the first in the area to have established personalized medicine. This means that when a patient in Kuwait Cancer Center (KCC) is diagnosed with breast cancer, we look at the histology and then the samples are sent to me at the Faculty of Medicine, where we look and sub-classify each tumour.

Q: What is the prevalence of the disease in Kuwait?

A: It is the most common cancer among women all around the world and Kuwait is no exception. Now, the breast cancer rate in Kuwait is around 50 cases per 100,000 a year. So, in a population of 3 million, for 1.5 million of women, you get around a thousand cases diagnosed with breast cancer a year.

Now breast cancer is so common that actually one in seven women will get breast cancer over their life-time. So it is quite common but the good news is we are treating it now so well that the mortality is really falling off very significantly world-wide.

Before, a woman would say that breast cancer was a death sentence. It is not so now. The secret to treating it successfully is early detection.

Q: What are the causes and risk factors associated with breast cancer?

A: If we look into the cause of breast cancer, it is very complicated. But there are some known factors associated with breast cancer. For example, we know that cancer, in general, comes with advanced age because of the aging process. Your chromosomes become very sticky to each other. We also know that women who start their period early or if a woman has late menopause, they are at a higher risk. Women who get children at a later age, or do not breast feed are also at a higher risk.

New studies show hormone therapies are actually not associated with it. But may be associated with other types of cancer, such as endometrial (womb cancer). It is quite controversial. So taking the contraceptive pill is not a risk factor for now. These are results from latest studies. However, people should be wary about these studies because the way they were done needs to be looked at very carefully.

An important risk factor is obesity. There is a very close relationship between increased weight and cancer in general, especially breast cancer. It is probably the type of food that might be filled with hormones. I am surprised at how frequently farm animals are injected with testosterone or hormones.

One important risk factor in Kuwait, which is largely ignored by people and doctors, is the genetic factor. The genetics of breast cancer is ignored because doctors do not understand it. The Faculty of Medicine, where I am a teacher, has no Genetic Department. So we have failed in educating our students and future doctors about the Genetic Risk and its influences on disease. We need to correct this situation and urgently.

Let me explain to your readers what I mean by genetics as a risk factor for breast cancer. If there is cancer in the family, then you should be aware of it. The first clue we had that cancer of the breast in Kuwait has a genetic base is that about 40 per cent of women actually get cancer at the age of 45 and below. In the UK and the West, cancer affects older women. So 40-50 is the age of the woman here, 60-70 is the age range in the West. So why do women get it so early here? It is devastating. Women at this young age would have just started their career, started their family. So we need to understand why women in the area, including the Gulf Cooperation Council countries, are getting breast cancer a decade before women in the West. We think genetics is an important cause of breast cancer in this area of the world. When we talk about genetics, we talk about the whole family. So you need to know how many persons in the family were diagnosed with any type of cancer. People will say I don't have breast cancer in the family but yes you might have a person with ovarian cancer, you might have a person with other types of cancer, colon cancer and prostate cancer in males. So you have to look deeply into your family history. To my personal disappointment, we have not looked at the genetics of women in Kuwait and this has been ignored for such a long time. The research that is done currently is poor. It is underfunded and we

need to start thinking of planning big research projects like National Projects. A national project that will involve many researchers, clinicians, epidemiologists, nutritionists and even sociologists who will all work on different aspects of breast cancer and come up with recommendations and novel data that can help patients and local economies.

Q: There is a lot of speculation and many urban myths associated with the causes of breast cancer like breast implants, the use of antiperspirants and underwired brassieres. Is there any truth to any of this?

A: I am very well read in this area. The association between wearing a bra and the use of antiperspirants are indeed myths. There are no good studies, to date, that link their use to breast cancer. My advice, however, is go back to nature and avoid anything artificial. I think this is a good point to remember. So the studies are very controversial. I am aware of one study on the use of antiperspirants but as far as I am concerned the study was not a well-planned one. So I am going to say there is not yet a direct scientific link between breast cancer and antiperspirant use.

Q: What are the preliminary symptoms of breast cancer?

A: In most cases, there are no symptoms. You would not particularly be sick or dizzy or get irregular period. There may be, however, signs like you may feel a breast lump or the breast may become retracted or the skin around the nipple becomes thickened like peau d'orange — the peel of the orange.

The idea is that we, as doctors and as awareness program advocates, want women to come forward to detect cancer early and as small as possible or even before it happens. People might be surprised to know that we have now developed powerful technology to detect defective genes causing or permitting cancer in individuals. For example, we know of two genes called BRCA1 and BRCA2 which when mutated (are defective) make a carrier woman prone to breast or ovarian cancer development.

Q: What lifestyle changes, if any, can help prevent breast cancer?

A: It is difficult to talk about prevention if we don't fully understand the cause of a disease. A lot of women come to me and say, "I have been breast feeding, I have been doing all the right things but I still got breast cancer." First, ask yourself, do I have cancer in the family and most of us do but do you have more than two to three individuals with any cancer in the family. Then, it is vital that you see a genetic counselor or see a geneticist and hope he or she would advise you properly. As I stated above, we now have developed the technology to examine the genome of individuals with cancer in the family and identify the defective genes that may have caused it. Most importantly, when we identify the defective gene in the family, we may now be able to prevent or catch the cancer early in the next generation.

Let's exercise. There is no doubt that exercise reduces the incidence and the recurrence of breast cancer and its ability to spread as well. Let's eat healthy, increase your vegetable and fruit intake while having less of meat and chicken because they

may be injected with hormones. Eat more fish. Increase your daily exercise, walk to work when the weather permits, walk up the stairs instead of taking the elevators. Minor changes in your life-style will have a big impact on your health in the future. A 15-minute exercise everyday will increase your life expectancy tremendously. All is so little, but there is so much to gain. Of course, avoid alcohol and smoking. There is a strong correlation between these two and cancer.

Q: How important is awareness of early detection?

A: I think awareness is one of the most important things we can do to save lives. Once women are aware about common breast cancer, they will examine themselves. This is one way of detecting breast cancer early. Another important way is to enroll in the breast screening program. I also encourage woman with a family history of cancer (any cancer type, in men or women) to see a genetic counselor and have her genes checked.

Q: How can screening help prevent cancer?

A: Screening is important. It is by self-examination and mammography, ultrasound; a kind of specialized imaging examination that detects breast cancer before a woman can feel it by self examination. However, the guidelines in the West for screening breast cancer do not apply to us because these guidelines are for women above 50 or 60. Our people have to be screened earlier, probably starting at age 30, because here women get cancer at a younger age.

Screening is very important because it means we are going to detect breast cancer early, which implies better treatment and a better chance of a cure. Of course, my personal wish is to include genetic testing as part of the screening program, especially in our country Kuwait, where women get breast cancer at such a young age.

A well-planned and well-executed screening program is required in Kuwait because we need to catch the disease early. There are people who will tell you that screening does not help. We think screening helps. There is good evidence that it does help. But, we have to adjust it to the age of our population. Don't start screening at age 70 if the mean age of breast cancer here is 45. Screening will fail if you do not plan it well.

Q: What is the standard of breast cancer treatment in Kuwait? Are there any shortcomings?

A: Here's my problem - I think treatment options in Kuwait are very advanced, in fact the treatment available here, is one of the most advanced in the area because we have very good staff and surgeons at the Kuwait Cancer Center. We have good pathologists who can look at the tumours and classify them very well. We have good oncologists and we also have good therapists. Don't forget the psychological aspect and that needs to be improved on.

The most important aspect of treating breast cancer is the team approach. It is vital that all members of the team are well trained and follow standard operating protocols.

It is vital to know that if one person on that team doesn't function well, patient care will ultimately be compromised. So I think we have good people around, but I don't think we have a good system. I would very much urge the Ministry of Health to start implementing a doctors' audit system to see how good we are or to retrain doctors who need to be retrained.

Now, another important aspect is that we need to follow international standards in our laboratories. Every laboratory should follow international standard protocols. These units should be internationally certified and they should always have internal and external quality assurance program. Luckily, the samples I received from the KCC are under a quality assurance program and we are working on our certification as well. I think Dr Adel Al Awadhi (Director of KCC) and Dr Hilal Al-Sayer are working very hard on these issues to improve patients' care.

Of course the addition of an electronic follow-up and database system will eventually lead to a better health care system for all patients and staff as well.

In Kuwait, we have also introduced the new concept of personalized medicine. We were the first in the area in this regard. We believe that this is a remarkable achievement for patients treated here in Kuwait because such life-saving diagnostic tests are only offered in developed countries.

Q: Have there been any failures or missed opportunities with regard to breast cancer prevention and treatment?

A: We need to improve breast cancer research and its funding. Do not expect the West to come and solve our problems. They cannot. Our clinicians and scientists are best suited to address breast cancer in Kuwait because we understand them better. How much do we spend on breast cancer research? Very little! I am devastated about this, especially since we can vastly improve breast cancer care and treatment by doing high-impact research.

The government, private sector, Kuwait Foundation for the Advancement of Sciences and Kuwait University need to increase research funding tremendously. Without extensive research, we will not be able to go far. There should be, as I said earlier, National Research Projects in this area, where teams of epidemiologist, surgeons, pathologists, molecular pathologists, therapists, social therapists, psychologists, psychiatrists, all work on one project, deciphering different aspects of breast cancer as one team. I actually went to a lot of people, very influential people to fund such projects. I have to admit that I failed. Now I am asking the people to lobby the Parliament and its members for such a vital project. We have a good infrastructure of research but we need extensive funding to succeed. That is a priority for the future because it will not only help the patients but also the local economy to prosper.

Q: What is the quality of life of women who are suffering from breast cancer?

A: This is where you enter the unknown. The quality of life will change definitely. There is no argument about that. Receiving the news of being a breast cancer patient

is devastating. There is no doubt that any one receiving such a diagnosis will be depressed and think, “Why me?” However, to some women, I know, with breast cancer, the diagnosis was a journey of life fulfillment and self-discovery. I encourage women to think positive, always. If we use our brains for positive thoughts it will help a lot. One thing to remember well is that “breast cancer is not a death sentence”. We can now treat it, especially if we detect it early.

Q: How does breast cancer treatment affect fertility among women?

A: Cancer that spreads to lymph nodes (small nodules in the breast and under the armpits) requires chemotherapy. Chemotherapy is known to influence fertility. Currently, woman in the West have the option of freezing the cells of the ovary before they get the chemotherapy.

Q: Is breast cancer stigmatized in Kuwait society?

A: Yes, unfortunately. In Kuwait, there is a social stigma. I have a lot of patients who tell me, ‘My family doesn’t know that I have breast cancer’ and when I ask why it is because they are afraid of being stigmatized. “They will look at me differently.” Please, women, avoid this. Tell people you have breast cancer. This is nothing to be ashamed about. You need to come out with your condition so people can understand what you have. If you keep quiet then you are bottling in all the sorrows and problems and people don’t know why you are avoiding them. You have to talk about it and if you do life becomes easier.

Q: How does breast cancer affect society? Are there any social repercussions?

A: This is not a disease that affects only a woman, it affects the whole family — the husband and the children. The future is suddenly not clear anymore. These people need support. The social aspect is very important. It is very important that the woman also seek help with regard to societies where the message is that you are not alone. One in seven women will get breast cancer in their lifetime - do not go into a room and hide. Go out and see other people. Talk to them and seek their advice. This is very important. Here, we need more help from an agency called CAN. They have done a marvelous job. But they need to sustain it and improve on what they have started. In the West, patients with different ailments form societies to help others. I think this is a great way of feeling better about yourself and aiding others. Women here should be encouraged to do this.

Q: How would you rate the awareness of the disease among people in Kuwait today?

A: I think it is becoming better. I think people are aware of it. However, we need to do much more as professionals to increase awareness. Also, the government needs to spend more money to increase breast cancer awareness. There should be more direct advertising in the public media, encouraging self-examination, joining screening programs and encouraging regular visits to doctors. I want to stress this again for its importance. What I want women to be aware of is their family history of cancer and

that we now have sophisticated technology that can look at all your genes at one go and incredibly we can tell you what disease you are prone to in the future. This is remarkable.

Q: Are there effective support groups for women suffering from breast cancer in Kuwait?

A: No, there aren't. We need to work on this issue more enthusiastically. We need more support groups. We need women to go out and make associations and societies to help other sufferers and avoid recurrent mistakes and problems. Such societies give great pleasure and purpose to their founders. I encourage woman to establish such societies and associations.

Saudi Arabia is really pushing forward on this front very well. King Abdulaziz University (KAU) announced that it will establish the first center of excellence in the region for breast cancer. They have established the Saudi Cancer Society whose member is Dr Samia Al-Amoudi, a breast cancer survivor, who is doing so much to help others. In Kuwait, the efforts are individualized and these pioneers need more governmental help and support. I invite people to visit Breast Care Kuwait to learn more about these local efforts (<http://www.breastcarekuwait.org/>).

Q: What is the economic burden of breast cancer to individuals and the economy?

A: Cancer in general has a huge economic burden, especially since 20 per cent of the population here are diabetic. There is a link between obesity, diabetes and cancer and specifically breast and colon cancers. In the future, it is going to be a huge burden on the Ministry of Health. This is a very important point.

It will take the government around a KD 100,000 to treat a person with breast cancer, depending on the quality of treatment and if they take new drugs or not. Imagine this - you have ten or twenty, thirty or fifty persons in your family and at least 6, 7 or 8 of them have cancer. There must be a genetic reason for this. A well-run screening program including genetic testing will save so much money for the government, as well as saving precious lives. For example, it costs around KD 1,000 only to do a genetic test on a family. How much do you save for the Ministry? A lot! This is the message I want to bring to the Minister of Health, if we look at the genes of the people, we save you a lot of money and we can save lives. Do not wait until people get cancer and then treat them. With screening and prevention, we can do better for everybody. It makes good sense for us all.

Q: In closing, what would you advise women today?

A: My recommendations are simple. Avoid risk factors (obesity, smoking, alcohol) and look at your family history; if there are two, three or more people with cancer, especially immediate family members - please seek help. We can detect the defective genes. It is costly but it is possible and effective. Do regular self examination and regular check ups. Exercise, try to change your life style in little steps. Their impact on your health will be multiplied. I am aware that my wife takes her car to the garage

for a service every six months but she doesn't take herself to a clinic every six months for a check up. We people in Kuwait need to be aware of our bodies and take good care of them.

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Dr Fahd Al-Mulla – Associate Professor, Head of Molecular Pathology, Kuwait University. Dr Al-Mulla is the Director of the Research Core Facility (RCF) at the Kuwait University Health Sciences Center. He is a Fellow of the Royal College of Physicians of Edinburgh. After he gained his MB, ChB, PhD degrees from Glasgow, UK and postdoctoral training, he realized the lack of infrastructure pertaining to the fields of Genomics, Proteomics and Cellular Biology in his home university. To alleviate the suffering of his fellow researchers and future recruits, he established a state-of-the-art facility specialized in molecular technology. RCF can be visited by clicking on this link (<http://www.hsc.edu.kw/vpo/rcf>). He heads a Molecular Pathology Unit, which aims at delivering state-of-the-art diagnostic, targeted/personalized therapy for cancer patients and molecular genetics (<http://www.al-mulla.org>).

Currently, as Head of Molecular Pathology, he is focused on identification of novel metastasis suppressor genes in colorectal cancer and spearheads a collaborative effort to promote public awareness as regards to the importance of scientific research outputs in resolving society's problems and in expediting the scientific development process in the Arab world especially in the field of the Arab Genome, the Human Variome Project and their relevance and application to clinical pathology. To that end, Dr Al-Mulla aims at narrowing the gap in technological advancement and health inequalities between the West and the Middle East.

By: Cinatra Fernandes

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