00:00:02  
*R:* OK. Well, thanks for taking part in the interview. Would you mind introducing yourself?

00:00:09  
*S:* I'm Dr. Vasanth Mark, I'm an associate professor in the Department of Surgery, Unit One at Christian Medical College Vellore.

00:00:18  
*R:* And we are talking about the laparoscopic instrument sterilization process that we observed in Simdega and while doing the observations we saw that they cleaned the laparoscopic instruments by basically rinsing them in tap water, then scrubbing them with soap powder, rinsing them again and placing them in Cidex. They would rinse it with the saline solution and then use it on the patient. Do you agree with that this is the process that they would use there?

00:01:02  
*S:* I would agree with most of it, but ideally they should have used a brush. Did they use a brush to brush hollow parts of the instrument?

00:01:12  
*R:* Not the hollow parts, they had a toothbrush to brush it.

00:01:14  
*S:* Ok, so that they didn't use an appropriate brush. So that would have been inadequate.

00:01:25  
*R:* Why do you think that they would have cleaned the instruments in the way that they do it? If you regard that workflow or the resource constraints that they have?

00:01:36  
*S:* I have a couple of observations. One is I'm not very sure what level of training they have had because it is a peripheral hospital and these are all resource crunched hospitals. As far as human resources concerned, as far as finances are conserned too. I am not sure how much expertise they have or what kind of training they have had, and that they have been taught the right way. Number one.

00:02:08  
*S:* Secondly, again, as I mentioned, maybe it's it's to do with a little bit of financial crunch, also. That they have been able to afford the correct instrument and the correct methods. I'm not pretty sure. I've been there for a very short period of time, but this is my observation.

00:02:29  
*R:* So, what what part of the materials did you think were most influenced by financial constraints?

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*S:* Maybe getting the right detergent and to get the right brush. When you take laparoscopic instruments, the ports need a specific brush. I'm not sure if a toothbrush can be maneuvered through the hollow parts of the tube. It can be very inadequate, especially the smaller 5mm size ports need a specific, tubular structure to clean within the lumen.

00:03:13  
*R:* The nurses told me that they had that all of them, I can't remember the exact term, had the general nursing training method.

00:03:23  
*S:* And midwivery, yes, GNM, as a background. That's a diploma, as we would call it, in our country. But not that that takes anything away from these nurses. Some of them do really well and some of them are trained at very good medical institutes. I'm just not sure if there is standard way by which we would know what kind of expertise they have to manage and take care of these instruments. When you look at a tertiary centre, like ours [CMC Vellore]. We have nurses who we know are trained and were taught the right method. Not sure if they follow the right method, but I'm quite sure that they are taught that. And we have designated personnel to take care of laparoscopic equipment. Whereas in the periphery you might have to be a jack of all trades. You might have to fit into multiple roles and one of them would be to clean the instruments as well.

00:04:24  
*R:* And if you're talking about the tertiary center, do you have specific training for cleaning instruments?

00:04:35  
*S:* Yes, we have. Nursing personnel are the ones who take care of most of the instruments in the theater, but of late these services also have been divided. Some of the nurses take care of assisting during the surgery. But as the remaining take care of the maintenance of equipment in theater. There are roles being alotted to them. And the ones who have been asked to take care of instruments, are definitely taught how to do that. And it's passed on from generation to generation. It's not a course. It's not a degree or it's not a qualification that they work towards. But it's something that they are trained in and they are taught how to do it.

00:05:20  
*R:* But it's always in a nursing task?

00:05:25  
*S:* Of late, we have we have certain male folk, usually nurses are women, but we have male folk who are not nurses, but who are basic science graduates have been employed and who are now laproscopic technicians. And they also help taking care of instruments. I feel that they are more aware of the handling of these instruments. So they have also been taught.

00:05:59  
*R:* So these are mostly work in the big tertiary center instead of the smaller rural ones?

00:06:05  
*S:* Indeed,

00:06:06  
*R:* If you look at the cleaning process that you saw in Simdega, what do you think is the influence on patient safety? Do you think there's big risks that you see?

00:06:21  
*S:* I'm not sure about that, but I'm going by what has happened so far, we've not had any major problems. At least. To my knowledge, because I'm just a visiting surgeon. And my experience there has been really good. We've not had what we have identified as infections and that's the number one worry in a surgeons mind when it comes to instruments not being cleaned properly. So far, we've not had a major problem. So I think they're doing a good job. But. I need to study it to further understand and see if there are any flaws in their system.

00:07:04  
*R:* So you think that the fact that there's no been no serious problem means that the cleaning process that they have is OK?

00:07:16  
*S:* Yes, I think it's adequate for that sector. Maybe. Looking at whether patient's have problems or not, I think they're doing well. So maybe it's adequate.

00:07:30  
*R:* One of the things that I noticed in the sterilisation process is that they don't ever steam sterilize laparoscopic equipment. What is your opinion on that?

00:07:49  
*S:* I was under the impression that when it involves optics you try not to use steam. I might be wrong, but somehow. Maybe my understanding was less. When you are talking about laparoscopy, specifically about the telescope, and things like that, they have a lot of plastic ports. I don't recall using metal ports in Simdega, I think they all plastic.

00:08:23  
*R:* They had they had metal ports, but a lot of surgeries were performed single incision or single port.

00:08:33  
*S:* They used the GILLS technique so you don't need to use a port. I'm not really sure how steam fits into the scheme of things there and as far as I'm optics are conserned I always felt maybe steam should be kept away. But then that's just one part of laparoscopic instruments, so it's just the telescope that I'm not sure about. But the rest of the instruments I'm sure can be autoclaved.

00:09:10  
*R:* I think more can be autoclaved than what people think here. A few people have told me that they would want to steam sterilize the equipment, but they would be afraid that unnecessary damage would occur.

00:09:32  
*S:* Yes, but that's naivety I guess.

00:09:41  
*R:* So that might have something to do with the training

00:09:44  
*S:* See as as medical professionals. What we are talking about it taught to us very early in medical school, we do learn microbiology and how to take care of instruments and how to autoclave and steriliser them. But it's not something that is constantly. We don't have an refresher course that keeps telling us how it needs to be done. Of course we do come across it in our theatres. But it's something that we don't give it a second thought to because it's taken care of mainly by the nurses, so we don't know.

00:10:22  
*R:* Yes, so in a hospital, who is the final responsible person for checking if this is the sterile working procedures up to standard?

00:10:35  
*S:* The nursing is in charge of the operating theatre. But as far as the responsibility is for the patient goes, it's the doctor.

00:10:46  
*R:* Yeah, but for the process it's probably the nurses?

00:10:51  
*S:* Also, if there is a breach, if there's a problem. It could be the nurses would be pulled up in the process. But if there's a problem with the patient. If there is an infection in the patient it will be the doctor who will have to answer.

00:11:07  
*R:* Yeah. But it will never be a surgeons task to comment on the sterilization process.

00:11:20  
*S:* No

00:11:20  
*R:* Ok

00:11:23  
*S:* It's not the surgeons task at all. He could question it, but he can't comment on it because it's taken care of by the nurses. You know, the sensible thing, if I have a problem I could always question and maybe audit it and to see if there's something going wrong with the process. A surgeon can do that. But the accountability of the process lies with the nurses.

00:11:49  
*R:* So then basically you have a problem in the peripheral hospitals, where the nurses have to perform tasks that they're not necessarily trained to do. And you also have surgeons who don't have the task of auditing the process that they already have.

00:12:13  
*S:* The nurses conduct regular checks and audits because our institution [CMC Vellore] is a tertiary institution. As I said, and we follow certain standards which are set by the national board of accreditation. So we have to have systems in place for that, systems require audits and periodic checks too. So that is taken care of by the nurses. But as you mentioned, the surgeons, we are not much aware of the sterilization process as such, and they're not accountable for that.

00:12:54  
*R:* Also, one thing that we saw is that the re-use of disposable products is what is your opinion about that?

00:13:05  
*S:* Again, I have done both while working in a mission hospital while working the resource crunched situation. We do re-use sutures mainly. That's mainly because of that's a financial decision. People cut costs and that's one way of cutting costs. And as we are becoming more and more aware now, that practice is now coming down. But this is something which has been happening for many years. When I was in Simdega I used to sutures which were re-used.

00:13:41  
*R:* And how about things like ligasure handles and ports?

00:13:46  
*S:* Sure, handles and ports we do re-use. And we re-use them in tertiary centers. We don't have disposable ports in tertiary centres.

00:14:00  
*R:* You always have the stainless ports that you re-use.

00:14:04  
*R:* And how about the Ligasure handles?

00:14:05  
*S:* You use it for a certain number of times and then dispose it. Again that the number of times that we use is recorded by the nurses. They keep track of how long or how many uses the laproscopic ports are being used. How they decide on the number i'm not sure, maybe four times, five times or whatever.

00:14:26  
*R:* OK, that's a big difference with the peripheral hospitals, is the tracking of those instruments. I haven't included it in my observation checklist, but I haven't found it up to now.

00:14:39  
*S:* In our centre they use a simple method. For each use, they mark the reuses. It comes in fives. They make a small mark on the device to track the process.

00:15:03  
*R:* It's a good system. That's a very good system.

00:15:05  
*S:* So the moment you have a you use it once we make one. The second time it's used another dash next with the permanent marker. So by the time you use the three, four times, you know how much it is used and then you dispose. That's used for all ports and Ligasure handles.

00:15:26  
*R:* Are you worried about if you can adequately clean those devices in between uses. even if you use them two or three times.

00:15:35  
*S:* Yes. We are worried about whether they're clean enough. And of course, these are all very precise instruments which are used for precise manouvers, so sometimes re-use causes some wear and tear on the tip too. So that is another concern too.

00:15:56  
*R:* The last question I actually had was looking at specifically in the process that we had in Simdega. Could you think of an improvement to that system?

00:16:17  
*S:* I think they should start by just having someone specifically for taking care of the instruments, for the amount of stuff that they have, for the amount of work that they do. They can afford to have one particular person who takes care of laproscopic instruments by taking care, I mean having a record of all the instruments, using them properly, then after it's used to cleaning them and making sure it's sterlilized the right way. And if you have maybe two designated people so that they can take turns and then send them for training. Which would hardly be over a day or two program or teach them exactly how it needs to be done. Give them a checklist, I feel a checklist works and let them tick off the boxes to make sure that they stick to these procedures.

00:17:10  
*R:* So creating a manual for the protocols, for the cleaning process?

00:17:15  
*S:* Have designated people train them and then tell them to keep an eye on things. The second point would be, is to find out if indeed autoclaves is better, maybe educate them and tell them that you need not fear of the instruments and start using steam too, because that seems to be more fool-proof. I might be wrong.

00:17:44  
*R:* Just out of curiosity. Do you know of those centers where they can follow this training?

00:17:54  
*S:* See most of the instruments are from Johnson & Johnson. Johnson and Johnson have a good presence in India. Maybe a couple of decades ago, they had these training centers, only in a few metropolitan cities, but now they have some of their network is quite good and they are willing to help in training nurses and in training doctors on how to use equipment and how to take care of it. You can use industry to help.

00:18:35  
*R:* Yes, most of the manufacturers will have their own guidelines for cleaning the instruments.

00:18:41  
*S:* They have a responsibility towards it and they will be the easiest people to get in touch with because they are using their instruments and they need to do business with you. So they'll be the first stakeholders so to say.

00:18:58  
*R:* If Johnson & Johnson has a good presence in India, why don't you think that there would be more interactions between the hospitals and these centers?

00:19:11  
*S:* Again, maybe their centers are not not adequate enough. I have been to a couple of centers in Chennai and Delhi. They are small centers. As I said, they cater to medical personnel too, so there are doctors who go there for training on various techniques. But maybe they should think of having training programs for nurses, too. If they don't have any so far. And as I said, since they're stakeholders, they are using their instruments at the end of the day and most of the instruments are theire. I'm just giving an example here. Like that is a harmonic scalpel. I don't know if you've seen the harmonic scalpel. It is patented. A Johnson and Johnson's product,Ligasure does not belong to Johnson and Johnson if I'm not mistaken, it belongs to Valleylab, Covidien.

00:20:08  
*R:* Covidien is a sub-brand of one of the major ones.

00:20:12  
*S:* But with Johnson and Johnson, the kind of presence they have they are almost like a monopoly. They have a very good presence over the world. Well, I'm sure you can have training programs from them. If you could find out from Simdega, I'm sure there are representatives from Johnson Johnson either visiting Simdega or visiting the distributors, who give supplies to Simdega. I'm sure you can get in touch with them. They're not very difficult to get in touch with.

00:20:50  
*S:* OK, I think that's all my questions, OK. Thank you so much.