

THE DRINK SPIKING INVESTIGATION PROJECT

Paul Quigley

Sir Charles Gairdner Hospital, Perth, Australia

Today I am going to talk about the drink spiking investigation project. I am an emergency physician, and at the time of this project I was a Senior Registrar in toxicology for Sir Charles Gairdner Hospital. Now a lot of people need thanks for this project – it is actually a very large project, and one of the reasons I am here to today is to encourage others to do similar projects. But you need to be aware of how much it takes to get it organised, and these are the sort of people that get involved: we had very good genuine help from the Western Australian Police Service and in particular their Drug and Alcohol Harm Minimisation Unit. We also involved the University as the incidence of drink spiking seemed to be prevalent amongst students. Also there is no way you can do a study that may or may not involve drugs as a form of assault without having sexual assault centres on your side as well, so SARC were able to give us some advice on forensics. So many thanks to all these people.

Now history tells us a lot when we study things, and the most important thing about this project is that there is absolutely nothing new about this issue at all. Drink spiking has been around since Adam wore short pants and if anybody has looked into the history of it, the most famous occasion has to be when Mickey Finn, running his bar in Chicago, got sick and tired of all the really noisy patrons and started to put chloral hydrate into their drinks. Initially this was fine as it just put them to sleep and the bar got nice and quiet, but then he started to lift their wallets as well, so he also became the first conviction for using a drug to stupefy someone. That is the official dictionary definition of a Mickey Finn. And for those of you who like the older James Bond novels, he seemed to be particularly susceptible to it - any *femme fatale* that was around used to give him a fuzzy little glass of champagne, and he would be out like a light. So it is certainly not a new issue.

If you go on to the Internet and do a *Google* news search on drink spiking, and get things sent back to your email box, you would be amazed at the volume of news articles which come back from all over the world within just a couple of days. You would imagine there is a huge drink-spiking epidemic out there. And so we are sort of under a lot of pressure, because it is in the newspapers, it is in the magazines, and it is on the Internet. I hate going out at the moment because I am constantly hearing of a friend of a friend who has had their drink spiked at some stage, and its never the person you are talking to, but always somebody down the chain a little bit. And then of course there is the story of waking up in a bathtub in Bangkok with a sign that says 'don't move, ring an ambulance, you've got no kidneys' – and again the story 'All I remember was being in a bar'.

There are some victim support groups out there that are excellent - because it is a confusing issue for a lot of people - but they are also very vocal, groups like the Roofie Foundation in the United Kingdom. Yet again, they do not really have a lot of factual or true evidential base behind their claims, but rather they are based on anecdotal stories and histories. There is a definite impression that the police are not succeeding, especially in the United Kingdom were from about 760 recorded victims, there have been just eight convictions.

And apparently we are not helping. Health professionals are not helping, because, whenever we are interviewed on the TV or the radio we just say – ‘Well a friend of mine, went to a pub and then...’ - so we are not that useful. We know that it is increasing though, and these are the actual police reports for Western Australia (refers to the screen) - these are people that actually go a police station and record the incident. Look at that for a rise (refers to the screen) so we were sort of pushed and the drink spiking investigation programme was developed.

It is a multiple agency project; we received funding for a hundred cases, at St Charles Gairdner Hospital, one of Perth’s Metro hospitals - seeing 38,000 new presentations per year, and we volunteered to receive and interview alleged drink spiking cases. Cases can be with or without police involvement, but they must be still intoxicated and/or drug affected, and must present within 12 hours of the onset of their symptoms. We are collecting urine and plasma, and we have a thing called the chain of custody, which I will go through at the end for you about the specimens.

So why is it such a big deal? Well first of all, being willing to receive alleged drink spiking cases. You may think that that’s a given for a hospital, but of course its not, because the bulk of patients who are concerned that they may be a victim of drink spiking are under some form of alcohol or drug intoxication. They themselves make impaired judgements and often most of their friends are drunk as well. Everyone with them in that social situation is likely to be intoxicated.

The thing is that there are a lot of problems in terms of education with staff in the emergency department, because when drunken people arrive, we’re busy, we are under pressure, and those of you that live in Australia will know that most emergency departments are constantly on diversion. We cannot get people in the front door anyway, and then someone drunk turns up. And everyone puts their emotion onto them, that it is somehow their fault, because they are drunk and therefore have lost a little bit of their responsibility. So if it actually turns out that they are a victim of something, they can get pushed aside a little bit, and it takes quite a lot to convince an emergency department that these are important people and that there may actually be something going on here.

The other thing is that, if this is a type of assault, it may be an assault with a tablet or a drink rather than a baseball bat but from a medical point of view it has the same problem: nuisance forensic reports, nuisance having to go to court, to be told by some defence attorney that ‘there was a UFO and a banana skin and a clown on a squeaky bike, and that is how that happened, surely, could that not be a possibility?’. And you know that you are going to have to stand there and go ‘well, it might be’. So people just put cards that are associated with forensic reports back and back in the pile.

Clinically, most of them are really safe, most of them are quite fine – they are not actually that sick. GHB is a bit of an exception, but it is a very, very small exception. With an overburdened health system, and with most people taking substances of no clinical significance, one of the most important things in toxicology is to get people to de-focus from the toxicological agent itself and just deal with the symptoms of the patient. This means that we do not care what is there. So we have actually spent a lot of time in Western Australia taking all the drug testing equipment out of the hospitals, because it prevents clinicians from becoming too focused on just the substance – they

should treat the patient. So, we then had to say ‘we want to bring them back for a little while’. But these patients don’t need hospitalisation, so it is one of those things “you’re in my emergency department, you’re taking up time, I’d better sort this out, I need to get you out”. So, it took a lot to convince people that we would do this project, and that we would actually advertise for cases to come in. And this just shows you, currently the state of the project (refers to the screen); this is what most people are presenting with. By far and away it is drunkenness, memory, confusion, and vomiting, which just an ideal emergency patient.

In terms of the interviews, we know there is a very distinct clinical picture of somebody that has been spiked. Basically it starts with being drunk or disorientated within minutes of having a drink; then there’s a distinct change from one state of being to another, and often individuals are with other friends at the time, so in the interview in the triage process of an emergency department you can establish all that history.

A very important issue and at the moment we have to say one that it is turning out to be extremely rare, is this business called ‘cameo-appearances’. Now anybody here who is a physician or who is familiar with anaesthetics will know what this is. It is when you are at sub levels of anaesthesia, so you are basically all but unconscious and not laying down any memories and then something painful happens to you, which lifts you out of your anaesthesia and you can lay down a memory for a short period of time. But once the stimulus goes away, you loose that ability and you become amnesiac again - but for that one split second you have a very vivid memory. If you get that in the history of talking to someone then you should be very suspicious, that they really have been given an anaesthetic agent. And also of course anything to do with an actual physical assault - which turns out again to be very rare overall. Of all the claims of drink spiking, the actual amount of people who have been assaulted seems to be very small.

In order to get entered into the trial, we said that patients just had to be either concerned themselves, so they felt that some thing was different, or that emergency staff thought the case sounded like a drink spiking when interviewing other people arriving with the patient. And as you can see, we got reasonable entry. Most were self presentations, but quite good numbers also came from ambulance and police, and as I say we took the extraordinary step of letting ambulance and police in Perth know that we would actually take these people as primary patients, which again is a bit interesting.

Now quite early on we realised that you have to clearly define what you are talking about, and the media in particular is very poor at this. There are two distinct types of drug alterations related to alcohol; first of all there is drug-facilitated sexual assault. Now drug-facilitated sexual assault appears to be a fairly methodical, planned and premeditated event. There is literally a predator and a victim, and there tends to be some sort of associated paraphilia, and some people describe it as warm necrophilia. A lot of these people are actually already in a one to one relationship with the person they are about to stupefy; they probably could have sex with them, that is the last of their problems, but it is not what they like, they like them a little bit floppy and a bit warm. That is of course the max factor here.

The other group though is 'pranking'. This is when recreational drug users, people who are very experienced in using recreational drugs, decide they will give someone else 'a bit of a fun time,' They will give them 'the experience'. So it is random, and it is sometimes malicious – for example to get the bouncer at the door because he is a complete pain. But the majority of the time they think it will be good fun, because their friend's a bit 'square' and it would be good to jazz them up a bit. But overall it is pretty stupid, because inexperienced people with drugs will always have bad effects.

Now, for drug facilitated sexual assault, you need a drug that has effects like alcohol, because then the victim will appear to be just a bit more drunk. You need to have a drug with a small dose for a big effect; you do not want to be standing there crushing up a hundred tablets and having to give it a good shake in a cocktail mixer, because people will spot you. You want it to be relatively sedative, because you do not want too much of a fight - if they put up a fight you would just be a rapist and that is not what these people are. They want people to be suggestible and pliable so that they give the impression to surrounding people that they wanted to go home. And they want the substance to be amnesiac because there is nothing like being a victim and not actually being sure whether you are a victim or not.

So what is the most suitable agent for that? What is the number one agent that has affected probably 95% of us here? Alcohol. It does all of that, you do not need anything else, and this needs to one of the big take home messages: you do not need anything else. Why have all these fancy drugs when alcohol in enough volume will have the same effect. And that is a big problem because alcohol is socially acceptable. Even with current patients that are coming through, when we are assessing them, they just will not acknowledge that the sixteen drinks they had beforehand had anything to do with it at all, because its what they drink everyday. And you think - 'well don't you think that that alone is a bit of a problem?'

It is socially acceptable, because you are told by your dad to make sure a girl gets a couple of drinks first, because it is a fantastic ice breaker. And your mum probably tells you as well to do it, as it will make him look a lot better than he does now. And of course everybody knows that if you have enough 'ice-breakers' you might be lucky enough to get to the 'knee opener'. That's life. We are taught that. And now we have started wondering why people are saying that they have had some sort of altering appearance in a nightclub. What we have to remember is that it is the intent behind these things that is malicious, not always the substance. People keep focusing on 'the nasty drug' - but its the nasty intent, if you were getting someone triples and quadruples when they only wanted singles, then that is actually the same, it is still malicious.

We collect drink histories: what was the first drink consumed, subsequent types and so on. Wines and spirits easily dominate, but that is also probably because of the sex mix. If you have 90% women, then beer is always going to feature lower. However, beer might be technically harder, if it actually occurs. But again, if you have wines and spirits then you are in the higher alcohol groups, so per standard unit drink that is where the money is.

This is currently what we have found in terms of blood alcohol levels (refers to the screen); over 76% of those presenting have got a blood alcohol level higher than 0.05,

which is just the standard driving limit. But if you look on the list, the bulk of them are actually greater than 0.1- 0.15 (refers to the screen), so they are reasonably intoxicated people at the time of their presentations. And that is just alcohol intoxication, let alone anything else.

Then you get this group (refers to screen), which is not particularly useful for sexual assault. This is the pure amphetamine. If you take methamphetamine or crystal methamphetamine, you are just going to get raved up, jerking round the place, thumping people - not good to get out of the bar and assault. But amphetamines have a great clinical toxidrome, which means any good clinical physician can spot one of these and say 'you've had amphetamine'. So, you can get this information from clinical history.

Now it was very important that we could include people with or without police involvement, because we know that a lot of people that get spiked are actually very dubious towards the police. They have a high level of mistrust towards the police; a lot of them are using recreational drugs anyway, especially cannabis, and they think the police will arrest them for that; and there is also a lot of self-doubt. And because we now know that in the cases where assault has taken place, victims are probably going to know the perpetrator, they may not want to go to the police, because then they are getting someone they know and respect into trouble. So when we look at our cases so far, there are only 6% that have ongoing contact with the police after all the investigation and history taking; and over 70% of them have never had any contact with the police, and never wanted it even when we recommended it. So you sort of wonder who is letting who down sometimes.

Now why do we want cases to still be intoxicated or under the effects of the drug? Well this is meant to be a proper clinical trial, and prior to these sorts of studies most presentations were done when patients experienced the effects on Friday but did not see a GP or the police till the Monday. Over 50% of the cases prior to this study presented after a whole 24 hours or more. And we know that the best urine is the first urine, and hopefully with the patient still being intoxicated, both the parent drug and the metabolites will still be around. You get steadily less value after 12 hours, and with GHB you have only got about 4-6 hours to spot it unless it is at very high levels. After 24 hours the alcohol level is gone as well, which means you cannot even correlate it to the overall event. Vomit is fantastic - it really is very good, but it has to be the first vomit, because that is the one where they have had the drink and then got sick and vomited, and that vomit is just like gold. But the problem is its also carpet, and beer-mat, and so on; and hardly anyone picks up the vomit from the pub, so it turned out not to be very useful.

Plasma is okay, but it has other complications in terms of the testing profile – there are lots of false positives, so we only use it when we have something in the urine to start with. It is often likely to be contaminated by recreation drugs, and we were very thankful for that because we found that they were good at telling us that our system works. If the patients were recreation GHB users, we got a red light on our machine, which was good for us because it meant if someone was not a recreational user we would spot them. There was a high rate of contaminated or recreational drugs, and you have to remember it is very hard to do forensic testing because a negative result may be detrimental to their case.

Now, there are lots of papers out like this (refers to screen). You have probably seen them - in fact there was even one from our chemistry centre in Perth whilst we were doing our study – that if you just get random urines associated with an event such as rape, and you screen them, there will be high rates of drugs and alcohol. And that is true because unfortunately, just as an animal, man seems to take life as a bit of a risk. And we constantly put ourselves in places of risks. And again, if we are talking about harm reduction, then the biggest thing that has to be noted is the amount of poly-pharmacy. So, one drug you could probably say is okay, but three or more, you are pushing your luck in terms of being able to control yourself.

The problem with this though is that there is no correlation here, so we do not know whether these unfortunate victims, prior to the assault, actually felt they were under the influence of a drug, or that was their own personal day-to-day way. This does not correlate. You cannot say this event happened because of the substance they had been using. So we use GCMS, which is the mass spectrometer, we look for ketamine, GHB, six benzodiazepines including flunitrazepam. We also do a routine drug of abuse screen and if we get any positives, like for amphetamine, we then run that through GCMS to sub-type it.

Our study times - and this is reduced by the study because we were not accepting cases in this early period. We have done better than we thought at actually getting people in, they have staggered in at two/ three in the morning and lain on our beds and vomited on our floors. And this is where they come from (refers to slide) - the important thing about this is that while three quarters of people come from pubs and nightclubs, over 90% of the actual assaults (the victims from the sexual assault group) came from that smaller quarter. In fact, around 80% of them came from private functions, where they knew the person, it was a much more intimate association, it was a much more one on one occasion, and basically there were beds up stairs, (why have sex with someone at the side of the road in a bush when you have a queen-size bed upstairs at the party). This has to be stressed, that we have found that the dangerous side of it is in the small one to one situations rather than big nightclubs where there are lots of people.

The chain of custody - basically we have been very careful that when we get positive results which suggest that an illicit agent was used without the knowledge of the patient, that it is all typed and that it can go to court, because this is very important if you are going to do these studies - that they are all sealed, witnessed and passed on to person to person. All of them are followed up by clinical toxicologists, we follow them up, ring them, tell them their results and recommend whether they need to go forward to the police or not.

We had plenty of problems – a limited budget for public awareness; we did really well when we launched this project because the media were right behind us, there were items in the nightclubs in Northbridge saying ‘go to Charlie’s if you feel unusual’. And it is amazing how quickly people forget - we are now hearing there are more people complaining out there but they are not seeking help, they have forgotten they can come in. We are excluding about 10% of cases at the moment, because there is no indication that they have any other syndrome except from being intoxicated, or they are still presenting too late. We got great physiological data, but then it turned

out that the nurses were just a little bit random at collecting weight, because we did not put it in as a specific requirement – (a handy hint for doing studies, put it in as tick box so they have to do it) – which means its going to be hard for us to get the majority of them to go back to work out what their maximum blood alcohol contents were.

Some things were too good - we had a whole group that were under two hours for the urine, so they may not have metabolites and things yet, but we are going to rerun these with liquid chromatography for their plasma. And it looks like the data - you have to be really careful about using these in general statements, because this is only in Perth; if you are going to use a substance and your going to put it in someone's drink, it has to be available, so it has to be on your streets. We just do not really know what GHB is in Perth, it is not around that much, and we have only recently had a good shipment of MDMA, until then it was two strong cups of coffee and a pseudoephedrine tablet.

As for the results - basically, we were hoping to present everything for you today, and I really do want to apologise, but we follow up all our cases and let them know whether they were positive or negative, and then also let them go to the police and to the court. We still have some outstanding cases – we have about twelve of those to go, and we do not feel it is fair to them to have any judgements that they want to make about what to do clouded by media reports, so I am afraid we have embargoed the final results. We do however recommend that we have learned a lot from it, and we recommend that other units do try and get together and come up with a similar passage, so - into hospital, formal physical assessment, toxicology results. And so you can establish similar studies for your area, which will be influenced by your local dance scene, your party dance scene and your culture. This is not going to give us an established Australia-wide, but hopefully it will be a start for everybody

Thank you very much