

1 **BEFORE THE ARIZONA MEDICAL BOARD**

2 In the Matter of

3 **MAHDI AL-BASSAM, M.D.**

4 Holder of License No. 21073
5 For the Practice of Allopathic Medicine
6 In the State of Arizona.

Board Case No. MD-04-0912A

**FINDINGS OF FACT,
CONCLUSIONS OF LAW AND ORDER**

(Letter of Reprimand)

7 The Arizona Medical Board ("Board") considered this matter at its public meeting on June
8 8, 2006. Mahdi Al-Bassam, M.D., ("Respondent") appeared before the Board with legal counsel
9 Paul J. Giancola for a formal interview pursuant to the authority vested in the Board by A.R.S.
10 § 32-1451(H). The Board voted to issue the following Findings of Fact, Conclusions of Law and
11 Order after due consideration of the facts and law applicable to this matter.

12 **FINDINGS OF FACT**

13 1. The Board is the duly constituted authority for the regulation and control of the
14 practice of allopathic medicine in the State of Arizona.

15 2. Respondent is the holder of License No. 21073 for the practice of allopathic
16 medicine in the State of Arizona. Respondent practices in Texas.

17 3. On his 2004 license renewal application Respondent reported two malpractice
18 cases that resulted in settlement since his last license renewal¹.

19 **Patient JM**

20 4. On August 30, 1999 JM, a fifty year-old female, presented to Respondent for a
21 consultation after being referred for evaluation of exertional pain in both legs. JM also complained
22 of retrosternal chest pain. JM was a long-time smoker with a reported history of "borderline
23 hyperlipidemia," but no other cardiac risk factors. Respondent performed a history and physical
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25 ¹ The Board discussed both cases with Respondent and voted to discipline Respondent regarding the care rendered in one of the cases.

1 examination and indicated JM's pulses were palpable in the lower extremities. A screening
2 Doppler examination ordered by another physician had indicated diminished arterial flow in both
3 lower extremities. Respondent recommended a detailed arterial Doppler examination of the lower
4 extremities and a stress echocardiogram. The arterial Doppler was reported as abnormal,
5 showing bilateral moderately severe iliac artery occlusive disease. The stress echocardiogram
6 was stopped after three minutes due to leg pain. JM did not reach target heart rate, but there
7 were no changes suggestive of coronary artery disease. Respondent discussed the findings with
8 JM and recommended angiography with intervention as indicated. On the Disclosure and
9 Consent Form JM circled "do not" on the option of receiving blood or blood products. On a
10 separate form JM indicated she requested "no blood or blood derivatives be administered."

11 5. The first part of Respondent's dictated procedure report describes his placement
12 of the arterial sheath and performance of the angiograms. Respondent's dictated report does not
13 describe the result of the angiogram, but Respondent's diagram indicates eighty percent stenosis
14 of the distal aorta before the iliac bifurcation. Respondent's description of the interventional
15 procedure included the following:

16 [f]ollowing that, the catheter was exchanged over a wire. An 8-French
17 sheath was inserted, and a 10-mm x 4-cm balloon was advanced to the
18 level of stenosis and inflated. Then a 3-cm x 10-mm stent was deployed at
19 the site of stenosis under high pressure. Following that, there was evidence
20 of the stent coming into the right common iliac on angiography. **Attempts**
21 **to move the stent back into position failed.** The stent was then
22 expanded into the origin of the right common iliac, with catheter cross over
23 into the left common iliac. A second stent was then deployed on a 12-mm
24 balloon, which was expanded at high pressure again at the site of the
25 patient's previous stenosis. Following that, controlled angiography was
performed. An 8-mm balloon was advanced in the anterior segment of the
common iliac on the right and expanded to allow for positioning of the stent
in the proximal segment. There was no reduction of flow in the left iliac
system." (emphasis added).

6. The sheath was removed from JM's femoral artery and she was transferred back
to the nursing unit. Among the entries in the computer event log from the catheterization lab are
the following:

1 12:16:15 procedure initiated via right groin
12:18:55 PT. tolerated sheath insertion well

2 12:20:53 PT. c/o severe pain at r. groin. Valium 5.00 mg
3 12:34:20 PT is sobbing remains with c/o discomfort at r. groin
4 12:58:47 PTA Balloon in with Pallmaz (sic) Stent
13:00 Stent deployed

5 The log notes several other PTA balloon inflations, but there is no mention of a second
6 stent being placed. Respondent's post-operative orders included an order to notify "House
7 Officer" for systolic blood pressure lower than ninety or pulse greater than 120. The "Short Stay
8 Record" references one Palmaz stent being used and contains a sticker denoting the lot number
9 of the stent.

10 7. The post-procedure nursing record contains recordings of blood pressure and
11 pulse from 13:56 pm until 18:25 pm. JM's systolic blood pressure ran between 100 and 120, and
12 her pulse also stayed between 100 and 120 per minute, until 17:43 pm when it jumped to over
13 130 per minute. The post-procedure nursing notes indicated JM was received back to the unit at
14 13:56 and complained of nausea, vomited 50 cc, and was given Phenergan. JM's blood pressure
15 was 105/31 and she was given a saline bolus. JM vomited again at 16:30 and 17:30 and her
16 blood pressure dropped at 17:43. JM's head was lowered and she was given IV fluids. The record
17 mentions labs being sent at 17:43, but the hematology lab sheet does not list any labs being
18 received at that time. JM's preoperative hemoglobin and hematocrit ("H&H") were 12.6/38.0. The
19 next recorded H&H was at 22:22 and was 2.4/7.2.

20 8. At 20:40 JM complained of being unable to breathe, was agitated and vomited.
21 The nurses called Respondent and gave JM Valium 5mg. At 20:50 JM was unresponsive and
22 required assisted respiration. JM was given Romazicon to reverse the Valium. Code Blue was
23 called at 20:55. At 21:39 JM was back in the cath lab and Respondent performed coronary
24 angiography that showed no coronary lesions. Respondent reported the abdominal aortography
25 showed a "good repair," but the right femoral artery was thrombosed and there was a large

1 amount of free air under the diaphragm. Respondent consulted with a general surgeon who
2 agreed to perform a "salvage" laparotomy, but while JM was being prepped for surgery she
3 developed asystole and could not be resuscitated. JM's time of death was 23:14 pm.

4 9. Respondent testified JM had multiple risk factors for vascular disease, symptoms
5 of vascular disease, and lab information of same. JM had findings of aortic iliac disease and he
6 took her to the cath lab on September 9, 1999 for angiography. Respondent noted he has
7 practiced for over thirty years doing endovascular work and, at the time of JM's case, had only
8 seen twelve patients with this condition. Respondent testified he performed a balloon
9 angiography outside the stenosis of the aorta, put a 10 mm by 30 mm stent in at the lesion, and
10 following inflation and removal of the balloon, he observed the stent migrate to the aortic
11 bifurcation. Respondent realized the stent was not fully deployed, was not opposed to the arterial
12 wall, and was acting as a foreign body in the distal abdominal aorta. Respondent testified the
13 standard of care for dealing with that situation is to attempt to snare and position the foreign body,
14 so he advanced a wire with a very soft tip to attempt to enter the struts of the stent and adjust it
15 so he could deploy the stent across the bifurcation where it was. Respondent noted the wire
16 would not advance through the strut, but kept going up into the aorta. Respondent testified he
17 abandoned the procedure and introduced a second stent on a 12 mm balloon and deployed it
18 across the stenosis at the top part of the stent that was already down at the aortic bifurcation and
19 then he inserted an 8 mm balloon to bring the stent up. Respondent noted the final configuration
20 he ended up with, that was satisfactory because there was good flow into the left iliac system,
21 was the 12 mm stent on the top, the 10 mm stent in the middle, and the 8 mm stent on the
22 bottom.

23 10. Respondent emphasized he did not move the stent, but attempted to put a wire
24 through the struts. Respondent testified he was with JM post-operatively to remove the sheath
25 because it was a large sheath and he was concerned about bleeding. Respondent testified he

1 worked with JM at 2:00 pm, gave her protamine and removed the sheath. Respondent noted JM
2 did vomit when he was present and he called the hospital repeatedly after leaving. Respondent
3 testified at about 8:00 pm he made a decision to go to the hospital because JM's vital signs had
4 not responded as he expected. Respondent noted he has agonized over JM's case for the past
5 seven years and has talked with many interventionists in this field and everyone seems to
6 suggest JM had an acute rupture of the aorta that went through the peritoneal wall into the free
7 peritoneum as a complication of the procedure.

8 11. The Board asked Respondent to talk about the different types of stents.
9 Respondent testified the stents he used in JM's case were polymer stents that deploy to the size
10 of the balloon used. Respondent noted there are other types of stents that are self-expanding and
11 have a continuous outer force against the arterial wall. These stents are usually deployed and the
12 balloon is inflated afterwards to fully oppose them to the arterial wall. Respondent noted
13 opposition to the arterial wall is crucial in both situations. The Board noted Respondent testified
14 he had not attempted to move the stent, but on page 36 of his records it says "attempts to move
15 the stent back into position failed." The Board asked if, in Respondent's attempt to reposition the
16 stent, the distal end of the stent could have lacerated the aortic system. Respondent testified if he
17 had moved the stent, it would have lacerated, but he did not move the stent and what happened
18 is the wire would not advance into the strut and remained in the lumen so he abandoned it. The
19 Board asked if the stent, misplaced as it was, could have lacerated the aorta. Respondent
20 testified he did not believe it had and he thought JM bled from the end of the aorta bifurcation.
21 The Board noted there were some notes made by the pathologist that there was a laceration on
22 the right common iliac and it could have occurred there.

23 12. The Board asked how often physicians attempt to reposition stents. Respondent
24 testified they are repositioned every time they float out of location and become free floating
25 bodies in the vascular system. Respondent noted he brought an article that described stents

1 moving in about twelve percent of the cases. The Board noted Respondent performed the
2 angioplasty, deployed the stent, unsuccessfully attempted to reposition it, put in another stent and
3 returned JM to the holding area; from the nurses' notes it appeared JM was quite sluggish, was
4 given pain medication, and was nauseated; JM's pre-cath blood pulse was around the 80's, but
5 her post-cath pulse was above 100; Respondent's written response to the Board indicated JM
6 was doing well and ate lunch, but the records do not indicate she had lunch; and in fact, indicated
7 she kept going to sleep and was tachycardic; and her blood pressure dropped around 5:43
8 necessitating her being put in the Trendelenburg position. The Board asked if this was a
9 common post-cath presentation. Respondent testified it was not and noted JM was described as
10 sleepy because she had a significant amount of sedation in the cath lab. Respondent testified he
11 went with JM post-operatively to the recovery area and went over with the nurse the signs and
12 symptoms to look for and stayed in close touch with them, as noted in the records.

13 13. The Board asked why a patient after having a difficult procedure done, would
14 need to be in a Trendelenburg. Respondent testified there were a lot of possibilities and, in JM's
15 case, she received a large amount of sedation, had been informed her youngest son was being
16 put in jail, and there was quite a commotion going on among the family during the recovery period
17 – so much so that he restricted visitors to only JM's mother. Respondent testified this was why, at
18 8:00 pm, he was not comfortable with JM sleeping with a pulse rate of 120 and why he went over
19 to personally assess her. The Board noted at 6:00 pm Respondent called in and was told by the
20 nurses that JM was sluggish and he ordered a stat Chem 7, but no H&H. The Board asked
21 Respondent to share his thoughts. Respondent testified he makes rounds in the evening after
22 office hours and he calls to see what patients he needs to go see. Respondent testified he was
23 told JM had vomited and he was concerned about electrolyte imbalance, which JM turned out to
24 have. Respondent noted he was told JM's pressure was stable and her pulse rate was remaining
25 stable and this is why he elected to not go see her after office hours that day.

1 14. The Board asked which of JM's complications was most worrisome. Respondent
2 testified the most worrisome thing is a retroperitoneal hematoma that occurs in approximately
3 0.75 percent of patients and this is why his questions always involved whether JM had abdominal
4 pain, groin pain, or back pain and he was always told "no." The Board asked the possible causes
5 of JM's hypokalemia. Respondent testified the fact that JM had contrast and diuresed with it
6 would drop her pressure as well as her vomiting. The Board noted JM had only vomited 50cc.
7 Respondent testified JM had diuresed with contrast significantly. The Board noted the records
8 reflect the issue of blood transfusion was brought up and at 18:30 JM was typed and crossed for
9 multiple units of blood. The Board asked what Respondent, as a physician, could do in the face of
10 an emergent situation, to bypass JM's refusal of blood products. Respondent testified when he
11 became uncomfortable with JM's vital signs he ordered the H&H and type and cross, but the H&H
12 got lost and did not occur until the code was over. Respondent noted the blood was taken and his
13 hopes were to convince JM to accept a transfusion because he had explained to her that morning
14 one of the most serious complications of the procedure is bleeding. Respondent testified JM told
15 him she was a Jehovah's Witness and that was her reason for refusing the blood.

16 15. The Board asked if there were ways for Respondent, as a physician, to circumvent
17 JM's refusal of blood products to save her life. Respondent testified he used plasma expanders
18 and IV solutions. Respondent testified in cases of retroperitoneal hemorrhage the treatment in
19 over eighty percent of patients is plain transfusions and only about twelve percent need emergent
20 surgery. Respondent noted in JM's case this is why he asked if she would accept blood and he
21 was going to go talk to her, examine her, and plead for her to accept blood products and this is
22 why he went to the hospital at 8:00 pm. The Board noted JM was typed and crossed at 6:30 pm
23 and the next hemoglobin was at 10:22 pm. The Board asked why, if they were able to get the
24 type and cross to the lab, was an H&H not done. Respondent testified when he ordered the type
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1 and cross he ordered an H&H that was not done until later because JM was having other
2 problems. Respondent testified when he orders a type and cross he orders a hemoglobin.

3 16. The Board noted Respondent's death summary assumed JM died from a visceral
4 tear and asked him to explain. Respondent testified one of the findings you would get with an
5 acute intra-abdominal bleed as compared with a retroperitoneal bleed is the patient's blood in the
6 abdomen that will give a sensation of bowel activity. Respondent noted you take the patient's fluid
7 levels and he and the surgeon both looked under the fluoroscope repeatedly because they could
8 not find a puncture site where there was blood exiting from the stents and they thought there was
9 a high possibility for blockage. Respondent noted the surgeon's notes mention that the surgeon
10 thought there was air in the diaphragm. The Board asked what the vessels where the stent was
11 originally placed looked like when he went back in and did the emergent cath. Respondent
12 testified they looked appropriate, the stenosis was gone, the bifurcation looked normal, and there
13 was an occlusion of the right common femoral artery below his entry site:

14 17. The Board asked if he could tell there was a tear if it had already thrombosed
15 around it and tamponaded and was not actively bleeding. Respondent testified there would be
16 two things he would see – one, a light shade of contrast because the contrast had been in the
17 patient at the time of the tear, and two, a compression from a hematoma where the actual vessel
18 is not in its normal position. Respondent testified he did not find either of these and when he
19 wanted to do the second procedure he told the family he believed bleeding from the first
20 procedure made JM's pressure drop and he was certain of that. The Board asked how this case
21 changed Respondent's medical practice. Respondent testified he has now gone beyond doing
22 angiography on patients when he does aortic and defect repair by doing a vascular ultrasound at
23 the end of the procedure in every case and he reviews the arterial wall clearly to look for
24 hematomas. Respondent reiterated he did not move the stent that was fully deployed and not
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1 opposed to the arterial wall. Respondent noted the stent was floating and he felt the stent was not
2 opposed and was not going to stay put down.

3 18. Respondent testified he had placed approximately 200 stents, predominantly in the
4 iliac vessel, before JM's case and was very familiar with the stent. The Board asked what
5 Respondent believed was the most serious complication of this type of stenting. Respondent
6 testified the most serious complication is retroperitoneal hematoma. The Board asked if it was
7 Respondent's normal procedure to get a post-operative hemogram knowing a retroperitoneal
8 hematoma is the most serious risk the patient runs. Respondent testified it was not his normal
9 practice to do that at the time of JM's procedure, but he has modified his practice to where he
10 now gets one about three or four hours following the termination of the procedure. The Board
11 asked Respondent his differential diagnosis of JM in the post-operative period when she was
12 tachycardic and in Trendelenburg. Respondent testified his differential diagnosis would be many
13 things, including nausea, vagal reaction, vassal dilation, diuresis of almost a liter of fluid out
14 resulting in volume contraction. Respondent noted these were the predominant diagnoses
15 because he was still looking and asking for the signs of retroperitoneal bleeding and getting a
16 negative so it was much lower on his scale of concerns.

17 19. The Board asked Respondent how bleeding could be highest of his complication
18 worries, yet lowest on his differential diagnosis. Respondent testified he did not mean his
19 differential diagnoses in the order he listed them and bleeding was the most important.
20 Respondent noted in ninety-six percent of the cases retroperitoneal bleeding has clear signs of
21 abdominal pain, back pain, groin pain, abdominal distension, visible hematoma, and bradycardia
22 in one third of the cases. Respondent testified he looked for these signs and did not find them.
23 The Board acknowledged Respondent did not find them, but he drew an electrolyte panel and
24 asked why he did not get at least an H&H, if not a full CBC, at the same time. Respondent
25 testified he did not have a problem with ordering a hemoglobin on JM and, the hemoglobin

1 change in the retroperitoneal hematoma that he was concerned about, is a late event.
2 Respondent noted he is more interested in the clinical signs of what it shows, but there is no
3 harm in obtaining it; it was just that he did not feel he wanted to do it at that time because JM
4 needed time to redistribute her vascular volume and, hemoglobins, if she was bleeding acutely,
5 do not change very much.

6 20. Respondent testified JM could not have bled as she did with this size of hematoma
7 slowly over time and there was nothing tamponading the blood from going into the peritoneal
8 cavity as compared to a retroperitoneal hematoma. Therefore, it was a very huge event. The
9 Board noted if Respondent had gotten the H&H and it was normal it may not have been
10 informative about whether or not JM was actually bleeding, but asked if her hemoglobin came
11 back at six would Respondent had done something differently. Respondent testified he very much
12 would have done something different.

13 21. The Board asked if when Respondent became aware of JM's exhibiting signs of
14 blood loss -- Trendelenburg position, tachycardia, and hypotension -- if he considered ultrasound
15 evaluation to see if he was dealing with a retroperitoneal bleed that he considered a much more
16 common complication as opposed to a free intraperitoneal rupture that can quickly bleed out.
17 Respondent testified he did not have access to an after hours ultrasound to be performed acutely
18 on JM. Respondent testified the only feasibility as far as testing would have been a CT scan of
19 the abdomen that can show a retroperitoneal hematoma. Respondent testified he considered
20 both upon his arrival, but he chose to go to catheterization instead because it was faster and he
21 was physically able to work with JM's as far as hemodynamic status.

22 22. The Board asked who ordered the Trendelenburg position when JM was
23 hypotensive. Respondent testified the nurses do it routinely and he did not order it. Respondent
24 noted JM was in the position for one or two minutes then brought back out. JM's systolic only
25 went down to ninety-five and then she was brought back out and placed in a regular position.

1 Respondent indicated the hospital had a full-time cardiovascular surgery department, but the
2 surgeons are not physically present in the hospital after-hours and are available for emergencies.

3 23. The Board asked Respondent if the way the distal end of the stent was placed and
4 his attempt to put the soft wire in could have lacerated the area with his attempts at movement –
5 could some very microscopic movement have caused the laceration. Respondent testified the
6 stent actually moved with systole so there was movement and it was possible that the laceration
7 occurred with the normal systolic impulse of the heart. Respondent noted however, when he
8 came up with the wire he faced the wall of the stent on the left side of JM and, if he injured that,
9 the likelihood is that he would have injured it on the left rather than the right, but he could not get
10 the wire into the strut.

11 24. The standard of care for a deployed intravascular stent requires the physician to
12 avoid attempts at repositioning the stent, other than further expansion by balloon dilation. The
13 standard of care required Respondent to recognize and timely treat a serious complication of
14 deployment of an abdominal iliac stent.

15 25. Respondent deviated from the standard of care by attempting to reposition the
16 stent other than further expansion by balloon dilation and for failing to recognize and timely treat a
17 serious complication of deployment of an abdominal iliac stent, including blood loss.

18 26. JM died from unrecognized massive blood loss.

19 **CONCLUSIONS OF LAW**

20 1. The Arizona Medical Board possesses jurisdiction over the subject matter hereof
21 and over Respondent.

22 2. The Board has received substantial evidence supporting the Findings of Fact
23 described above and said findings constitute unprofessional conduct or other grounds for the
24 Board to take disciplinary action.

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DATED this 11th day of August, 2006.



THE ARIZONA MEDICAL BOARD

By *T. C. Miller*
TIMOTHY C. MILLER, J.D.
Executive Director

ORIGINAL of the foregoing filed this
11th day of August, 2006 with:

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Executed copy of the foregoing
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