Placental mesenchymal dysplasia (PMD) is a rare placental anomaly characterized by placentamegaly and grapelike vesicles. We report a 38-year-old woman 2-gravid 1-para with an abnormal cystic appearing placenta at first trimester ultrasound scan, suspicious for PMD. She was referred to our tertiary center at 18 weeks' gestation. We performed an ultrasound, the placenta had multiple vesicles and low density of vascularization in the chorionic plate confirming the diagnosis. At 27+1 weeks' gestation she was admitted to La Spezia Hospital due to a reduction of fetal movement. An ultrasound was performed and a fetal growth restriction was diagnosed. She was transferred to our Hospital. We performed computerized non stress test (cNST) that had no fetal movement and no high variability episodes. The ultrasound showed rare respiratory movement, PI and RI of umbilical artery (UA) were 1.51 and 0.86 respectively and there was absence or reversal end-diastolic velocity of UA (AREUA). We decided to recovery the patient. After three hours we repeat a. cNST that didn't fulfill the analysis for no high variability episodes and an ultrasound that showed AREUA. The peak systolic velocity of middle cerebral artery (PSV MCA) was > 1.5 MoM. There was absence or reversal of blood flow during A-wave in the ductus venosus (DV) and hyperechogenic intestine was noticed. We decided to perform a single course of corticosteroids. Two hours later, another ultrasound revealed reversal of umbilical artery end diastolic velocity of UA, PSV MCA > 1.5 MoM, reversal A-wave in the DV and no fetal movement. A c-section was performed. A female baby weighing 750 g was borned, Apgar score was 1-5 and pH 7.19. The newborn hemoglobin was 4.5 g/dl. The placenta, grossly, was markedly enlarged, its weight was over the 97Th centile, the fetal surface had multiple vesicles while the chorionic plate had multiple dilated chorionic vessels.