Methods: From Jan 2013 to Dec 2017, 17170 cases received level I ultrasonography during late pregnancy (28-42 weeks). All physicians were operated according to The Guidelines for Prenatal Ultrasound (2012). The results of ultrasound were compared with the results after delivery.

Results: 35 cases were detected by ultrasound (detection rate 0.2%). The positive results were as follows:
Abnormal urinary system: 7 cases of renal pelvis separation (>10 mm)—all were normal after birth; 4 cases of renal cystic dysplasia, 3 cases of unilateral renal did not show and 1 case of giant bladder. All were consistent with the results of postpartum re-examination.
Cardiac malformation: 1 case of complete transposition of great arteries, Tof, ASD and aortic root thin with VSD. All were consistent with the results after birth.
Central nervous system malformation: 1 case of cyst in the posterior part of the 3rd ventricle. 3 cases of lateral ventricle widening (>10 mm). Postnatal MRI revealed: 1 case of simple cyst in the 3rd ventricle, lateral ventricle widening and abnormal brain development, and 2 cases of ventricular widening.

Digestive tract malformation: duodenal atresia in 1 case, consistent with the results after birth. 3 cases of dilatation of intestine (>18 mm). No abnormalities were found after delivery.
There were 2 cases of cleft lip and limb short, 1 case of diaphragmatic hernia, chest wall mass and right pleural effusion. All were consistent with the results after birth.
1 case was misdiagnosed. Ultrasound found NF was thickened. Newborn was macrosomia (weight 5300 g), and the structure was not abnormal.

Conclusions: Our study confirmed that abnormal urinary system is highly sensitive to level I ultrasonography in late pregnancy. Heart and digestive system abnormalities are high detection rate and severe postpartum consequences. Through observing the emphasis, it can help the discovery deformity, help the clinician evaluate the fetus, make intervention plan, and improve prognosis.